TenneT Holding B.V.

Integrated Annual Report **2024**

We're on it. Together.

TENNET

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Cover: Eindhoven's busy city centre captures the energy and movement of daily life. It reflects TenneT's role in keeping the lights on and supporting the energy transition in the places where people live and work.

* The Executive Board Report and the Sustainability statements reflect the director's report as mentioned by Part 9 of Book 2 of the Dutch Civil Code.

Disclaimer PDF print – Statement – This copy of the Integrated Annual Report of TenneT Holding B.V. for the year 2024 is not in the ESEF-format as specified by the European Commission in Regulatory Technical Standard on ESEF (Regulation (EU) 2019/815). The ESEF reporting package is available at https://www.tennet.eu/company/investor-relations/financial-reports/ In case of any discrepancies between this 'printed version' and the ESEF reporting package, the ESEF reporting package prevails.

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TenneT at a glance

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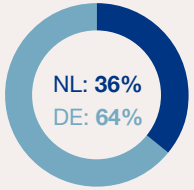
Key figures

Building the electricity grid of tomorrow

Future proof grid
Investments (EUR million)

10,637

NL: **3,783** | DE: **6,852** | NR*: **2**
2023: 7,730
Target: 10,919



Circuit length
In kilometres

245

Target: 261

Newly installed GW offshore

0.0 GW

2023: 2.3 GW
Target: 0.0

Utilise the grid to empower society

Grid availability (onshore)

99.99988%

NL: **99.99988%** | DE: **100.00000%**
2023: 99.99993%
Target: 99.99962%

Grid availability (offshore)

97.09%

NL: **97.58%** | DE: **96.77%**
2023: 97.90%
Target: 95.07%

Deliver more grid capacity together for our customers and to serve society

Initiatives

30

2023: 27
2022: 11

* NR = non-regulated

Key figures

Create a safe and inspiring workplace

Safe workforce
Total Recordable Incident Rate

4.0

NL: **1.9** | DE: **5.7**
2023: 4.5
Target: 3.7

Healthy workforce
Absentee rate

NL **3.6**
DE **3.3**

2023: NL **3.9** | DE **3.4**
Target: 3.0%[1]

Diverse workforce
% Female inflow of total inflow

32%

NL: **34%** | DE: **29%**
2023: 32%
Target: 32%

% Non-Dutch/non-German inflow

11%

NL: **12%** | DE: **10%**
2023: 11%
Target: 10%

Transition to a brighter energy future within social and planetary boundaries

Environmental impact
Reduction of carbon footprint compared to base year 2019 (Scope 1 and scope 2 market-based emissions)

93%

Target 2030: 95%

Percentage of non-virgin materials procured

2%

Percentage of recoverable waste

97%

Number of environmental incidents

171

2023: 190

Safeguard sustainable financial performance

Healthy financial operations
Underlying EBIT group (EUR million)

1,745

2023: 1,817
Target: 1,680

Safeguarded capital structure
Adjusted FFO/Net debt group

8.2%

2023: 11.6%
Target: 8.0%

Satisfied capital providers
ROIC group (%)

4.7%

2023: 5.8%
Target: 4.3%

[1] No target value for absentee rates, however a value TenneT strives for.

Key events of 2024

02

February - Start of offshore grid connection project BorWin6
As part of the BorWin6 project in Büttel, a fourth high-voltage direct current transmission for offshore grid connection is now being implemented. The wind power generated at sea off the coast of Lower Saxony is transmitted as a three-phase current to a TenneT converter platform, where it is converted into direct current and transported a total of 235 kilometres to the Büttel converter. This makes it TenneT's longest offshore wind energy connection system to date. Commissioning is planned for 2027.

03

March – Reappointment of Maarten Abbenhuis
In March, Maarten Abbenhuis was reappointed by the Shareholder as statutory director of TenneT Holding B.V. for a second four-year term, from 1 January 2025 – 31 December 2028.

04

April - TenneT publishes investment plans in the Netherlands and Germany
In April, the Dutch grid operators published their investment plans, which give more insight into investments and projects of grid operators for the next 10 years. TenneT expects to carry out around 700 major infrastructure projects. In Germany, the Federal Network Agency (BNetzA) confirmed the Grid Development Plan (NEP) 2037/2045, presented by the four German grid operators.

June - Discussions on a full sale of TenneT Germany terminated
In June, discussions concerning the full sale of TenneT Germany between TenneT Holding and the German investment bank (KfW) acting on behalf of the Federal Government of Germany were terminated. TenneT Holding is preparing to tap into public or private capital markets for a structural funding solution for its German operations. In the meantime, TenneT remains fully committed to executing its large investment plans in both countries, backed by the Dutch State which provided TenneT a EUR 25 billion shareholder loan facility for the years 2024 and 2025 and EUR 19.4 billion for the years 2025 and 2026.

06

07

July – Development of multi-terminal hubs with DC circuit breakers begins
German transmission system operators and industrial companies launched an innovation partnership to develop multi-terminal hubs with DC circuit breakers. These multi-terminal hubs make it possible to efficiently use and distribute large quantities of wind power generated along the North Sea coast. By connecting direct current (DC) lines, they can flexibly deliver energy to where it is needed most. This innovation will establish the first extra-high-voltage DC grids.

Key events of 2024

August - Battery giant and TenneT conclude first time-based contract
TenneT concluded the first ever time-bound contract. This was a milestone marking an important step forward in the more efficient use of the existing electricity grid. The new agreement gives customers the right to take electricity off the grid or feed in at least 85% of the time. This is offset by a discount of up to 65% on transport tariffs.

08

November – Commissioning of largest AC project in Germany
The Wahle-Mecklar project ensures the transmission of wind energy on the north-south axis and stabilises the network in Lower Saxony and Northern Hesse. With the completion of the remaining section in the Göttingen region, the overall pipeline is now fully operational. With 566 pylons, electricity now flows through more than 210 kilometres of overhead line and 20 kilometres of underground cable.

11

November - Interconnector LionLink included in Offshore Wind Energy Development Framework by Dutch Minister of Climate and Green Growth
TenneT may now make investments for LionLink, the first direct-current hybrid interconnector. This project connects the Dutch offshore grid connection of wind farm Nederwiek 3 to both the Dutch and the UK onshore high-voltage grid. The connection can also be used as an additional high-voltage link to exchange electricity between the countries. LionLink could supply up to 2 gigawatts (GW) of electricity.

December - Power Grid in Zuid-Holland reaches maximum capacity and no extra space can be made in large area of Noord-Holland
In December, TenneT announced that the high-voltage grid in a large part of Zuid-Holland has reached its maximum capacity. This marks the last province in the Netherlands where there was still available capacity for large electricity consumers. Efforts are now being made to accelerate the construction of energy infrastructure and to optimise flexible use of the existing grid. In addition, research shows that no extra capacity can be created in Noord-Holland. This means that many areas in the province will face waiting lists for large electricity consumers for at least the next ten years, further highlighting the urgency of addressing the growing demand for electricity nationwide.

12

December - Tim Meyerjürgens appointed CEO of TenneT Germany
Tim Meyerjürgens was appointed Chief Executive Officer (CEO, Vorsitzender der Geschäftsführung) of TenneT Germany. The appointment took effect on 1 January 2025.

Manon van Beek, Chief Executive Officer

We're on it. Together.

2024 was a turbulent year, both geopolitically and within Europe, where economic competitiveness is declining compared to the United States and Asia. High energy costs threaten the future of European industry. Structural dependence on fossil fuel imports—exacerbated by Russia's ongoing war in Ukraine—has driven recent price spikes. To counter this, Europe must accelerate its energy transition and electrification to become more energy independent. The European Commission rightfully emphasizes the urgent need for significant investment in energy grids, modernizing transmission, distribution, hydrogen, and storage infrastructure to achieve a net-zero system.

In our domestic markets, the Netherlands and Germany, consumers and businesses are navigating the ongoing reality of higher costs and energy bills, fueling an important conversation about the affordability of the energy transition and the secure supply of electricity. Precisely to meet these concerns, we are making bold and necessary strides, with some EUR 200 billion set to be invested in grid expansion in both countries by 2034. Achieving this ambitious goal relies not only on technical progress and financial commitment but also on the people who make it possible. Providing a safe working environment for everyone working for and with us is essential, as safety is a pre-requisite for everything our people do in their work for TenneT.

"Electricity grids are at the core if we want to meet the climate target of no more than 1.5 degrees Celsius temperature rise. TenneT's large scale investments in the energy transition are therefore no-regret. For more and smarter grids to be realised, we need to mobilise private capital for TenneT Germany."

Arina Freitag, Chief Financial Officer

Our investment portfolio is not just about infrastructure – it's about building a sustainable electricity system that supports Europe's 2050 climate goals and driving the implementation of national renewable energy policies. Likewise, it's also about maintaining and even increasing our prosperity and the energy independence of European, Dutch and German societies.

The urgency, scale, and complexity of this challenge are too vast to face alone. Success depends on the strength of collaboration and the collective effort of all stakeholders across the chain. That's why this year's Integrated Annual Report carries the theme 'We're on it. Together.' For us, being "on it" means staying proactive, energised, and determined to overcome the obstacles in our way. As an example, we're working relentlessly, together with regional grid operators and governments at various levels, to solve persistent issues such as grid congestion and long waiting times for new grid connections.

Building European competitiveness

As Europe strives to bolster its global competitiveness, collaboration, foresight, and innovation have never been more crucial. The Draghi report, spearheaded by former European Central Bank Governor Mario Draghi, aligns with TenneT's vision for a green energy future. The report emphasises the urgent need for expanded infrastructure, anticipatory investments, and robust international co-operation, particularly across the North Sea.

This shared vision resonates strongly with TenneT's Target Grid 2045 strategy. By proactively developing and investing in the grid, we aim to transform the North Sea into Europe's green energy powerhouse. This forward-thinking approach ensures long-term benefits for future generations. At TenneT, our mission transcends borders, and we trust that governments in the Netherlands and Germany share our commitment to a collaborative energy future.

"The security of supply level in 2024 has been high, as society can expect from us. This is the result of all the effort our colleagues put into TenneT. At the same time, we are preparing and building the high-voltage grid of the future. This requires massive infrastructure expansion, better utilisation of the existing grid and an innovative mindset on market design. These elements will strengthen the momentum towards Target Grid 2045."

Maarten Abbenhuis, Chief Operating Officer

Key requirements for success

To achieve our goals and thereby those of our society, four essential conditions must be met. The first is ensuring that planning and licensing allows the smart and rapid expansion of grid infrastructure. Access to sufficient space to build is critical. We know this isn't easy. The Netherlands has well-known space constraints and high population density. And yet we need to find a significant amount of space for our grid expansion projects. National and especially provincial

governments play a crucial and socially responsible role in this, helping us to plan and reserve the space we need.

Second, we need enough skilled labour. Building the Target Grid is a huge undertaking, requiring a fast-growing and highly skilled workforce. In 2024, our workforce increased with 1,357, but we are just one of many employers looking for talent. Even if we recruit enough people, it only solves part of the problem. We need the whole supply chain to be adequately resourced to achieve our mission together.

Third, we need sufficient materials and other critical resources. Global pressures on the supply chain, made worse by geopolitical and economic instability, inflate prices and make it more challenging to secure critical resources. We are addressing these constraints by establishing partnerships and long-term framework contracts with suppliers – an approach we achieved again in 2024. In an increasingly tight market, we believe this is crucial to ensuring realistic planning and reliable delivery of our projects.

Fourth, we need political and policy support, with timely decision-making from national and European policymakers. As grid development involves decades-long planning, policy visibility of just four years ahead is not enough – we need to see to 2040 and beyond. For example, in both Germany and the Netherlands, we need strong public policy guidance on the use of overhead high-voltage connections versus underground power cables. Clarity on these topics is critical, from the perspective of cost, security of supply and realisation time. The debate over how to integrate nuclear into the Dutch energy mix, and how that relates to the offshore wind agenda, also has a big impact on us. These are the types of long-term questions we need answers to now. We see a clear need for policy direction and consistency from national governments.

Collaboration across the value chain

The energy transition is a collective effort requiring seamless integration of various technologies like hydrogen and battery storage. The electricity grid cannot exist in isolation; it must interact cohesively with the broader energy system.

Strong partnerships are vital—not only within Europe but also among North Sea countries and between the Netherlands and Germany. As TenneT evolves, maintaining close ties between our Dutch and German operations, as well as with political, investment, and shareholder stakeholders, remains critical.

Enhancing Europe's competitive position in the energy sector, particularly in relation to global powers like the United States and China, will require innovative financing. Engaging with institutions like the European Investment Bank and the European Commission is essential to unlock new funding mechanisms and attract private capital.

Internally, we sharpened our strategy in 2024, with an improved focus on customer needs and societal expectations. By embracing unconventional solutions and pioneering new approaches, we aim to build faster, utilise the grid better and work smarter and more sustainably. Leadership, too, plays a pivotal role in fostering trust, embracing vulnerability, and forging partnerships to overcome resistance and unlock progress, and we have supported our leaders in leading through ambiguity.

A shared responsibility

The progress we've made with Target Grid and the LionLink hybrid interconnector underscores the transformative potential of Europe's offshore wind resources. These projects are pivotal in delivering cheaper, cleaner, and more independent electricity for all.

While society demands a reliable, affordable, and sustainable energy system, we must also address the rising costs of grid investments, which inevitably impact tariffs for consumers and businesses. This underscores our social responsibility to find equitable, sustainable solutions in collaboration with grid operators and governments.

The cost of inaction is far greater than the cost of building the grid. Without decisive investments, the energy system will fail to meet rising demands, businesses will stagnate, and offshore wind electricity will remain untapped. By contrast, a decarbonised economy promises climate resilience, energy independence, and sustainable growth.

"Of course, we are very focused on our national concerns regarding an affordable and sustainable electricity system. However, we need to plan across borders if we want to create an efficient renewable energy system; the energy transition is a joint European task in which the better we work together, the more successful we will be."

Tim Meyerjürgens, Chief Operating Officer

Our Target Grid strategy ensures cost-efficient planning by building only the infrastructure society genuinely needs and leveraging cross-border electricity market efficiencies. Moreover, smarter grid utilisation—such as alternative contracts to optimise off-peak usage—can alleviate grid congestion, cut waiting times for connection and reduce the need for new infrastructure.

Addressing disparities in grid tariffs across Europe is a priority. The current "user pays" principle ensures fairness among major users, but harmonising energy rebate schemes at the European level is essential for a level playing field. Vulnerable groups, including households and major industrial players, also require targeted support to combat energy poverty and foster economic vitality.

People and partnerships drive success

Our achievements stem from the dedication of our people and the strength of our partnerships. Despite external pressures, our teams continue to deliver exceptional results while prioritising safety. As we reflect on 2024, we express our heartfelt gratitude to all our employees and partners who make our mission possible. The journey to a secure, affordable, and sustainable energy future demands collective strength and resilience. At TenneT, we are fully committed to tackling these challenges together—because together, we are on it.

With warm regards, heartfelt thanks and confidence in the journey ahead of us,

On behalf of TenneT's Executive Board,

Manon van Beek (CEO)

Update on structural financing solution for TenneT's German activities

The fast acceleration of TenneT's grid expansion, onshore and offshore, requires unprecedented investments in the Netherlands and Germany. TenneT's investment plan in both countries for the period 2025-2034 adds up to some EUR 200 billion, which is expected to be funded primarily through debt but also requires equity.

As a potential solution for the equity need in respect of its German operations, TenneT announced in early 2023 that it intended to explore the possibility of a full sale of its German operations to Kreditanstalt für Wiederaufbau (KfW), acting on behalf of the German state.

During 2023, constructive discussions took place between TenneT Holding and KfW, with close involvement of the Dutch State as TenneT's sole shareholder. Although extensive discussions lasted for more than a year, the Federal Government of Germany informed the Dutch State that it could not deliver on the envisaged transaction. As no agreement could be reached, negotiations were formally terminated in June 2024.

As a result, TenneT Holding, in close co-operation with the Dutch State, is exploring alternative structural funding solutions for its German activities. As the Dutch government has said it prefers to not use Dutch taxpayers' money for grid investments in Germany, the preferred structural solution for TenneT Germany's capital requirements is either through an investment in TenneT Germany by private investors, or by a potential listing of TenneT Germany to raise equity in the public capital markets.

At 12 January 2024, TenneT and the Dutch state have agreed upon a shareholder loan facility of EUR 25 billion to safeguard the financing of TenneT's planned investments in the Netherlands and Germany for 2024 and 2025.
At 21 February 2025, TenneT and the Dutch state have agreed upon a supplementary shareholder loan facility of EUR 19.4 billion, safeguarding TenneT's planned investments in the Netherlands and Germany for 2025 and 2026. The loans drawn from the facility will be granted at market conditions.

With the aforementioned loan facility and the successful issuance of the EUR 1.1 billion Green Hybrid Bond in 2024 (issued to refinance the Green Hybrid issued in 2017), TenneT has the financial certainty it needs to remain fully committed to executing the investment plan in both countries, delivering the grid capacity in time for our customers.

In order to have an organisational structure in place for potential investor participation in TenneT Germany, TenneT is transformed from a fully integrated, functional steered organisation into two independent, national TSO organisations as of 1 January 2025: TenneT Netherlands and TenneT Germany, held together as a group in TenneT Holding. TenneT Germany has appointed CEO Tim Meyerjürgens per 1 January 2025.

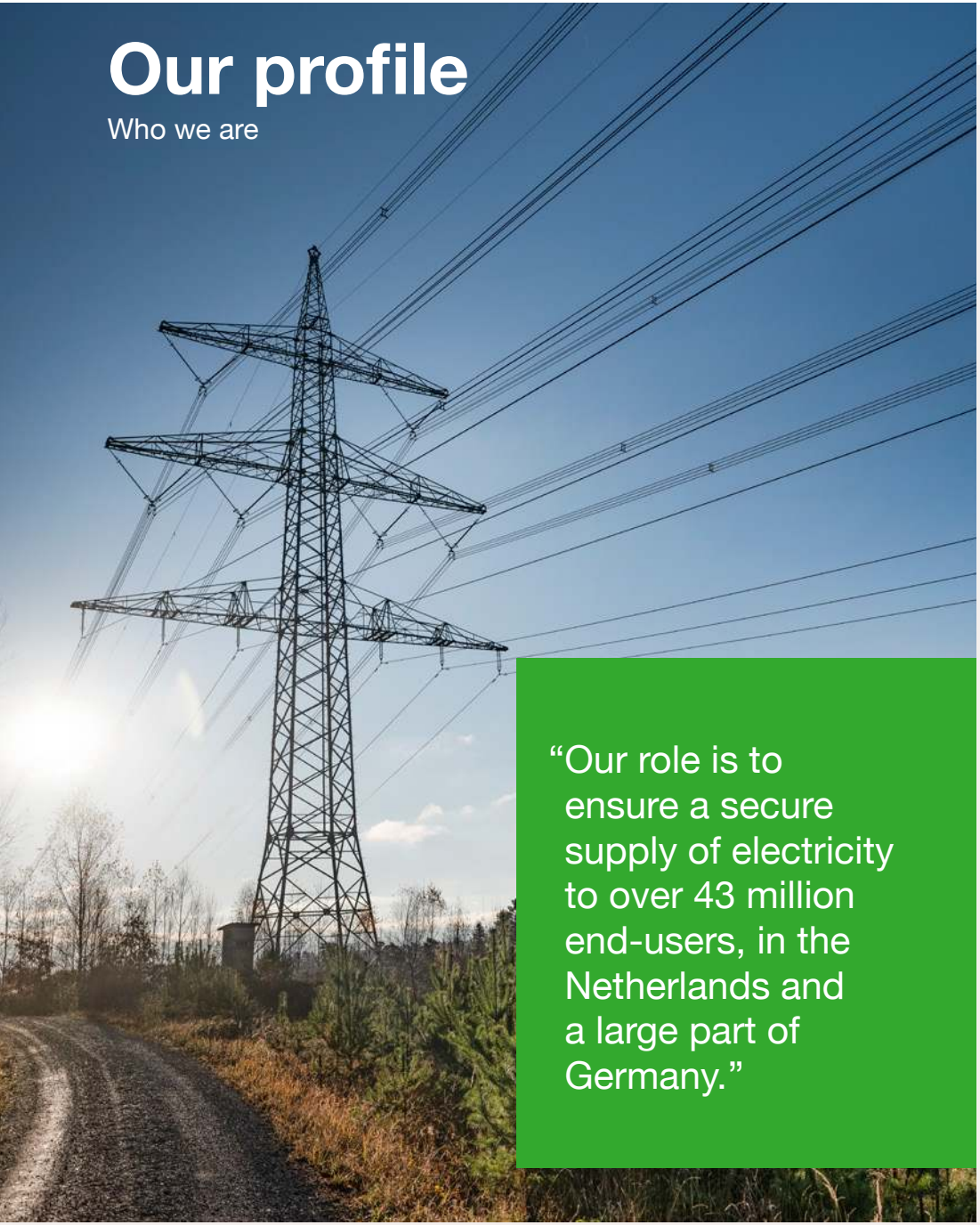
TenneT will continue leveraging group synergies where possible. Achieving synergies across our operations has been a crucial driver of TenneT's success over the past decade, enabling the company to deliver value and impact at every level. So regardless of the future ownership of TenneT Germany, the company continues close co-operation across national borders.

TenneT has developed a unique culture and its number one synergy is the co-operative mindset, which allowed setting standards and driving meaningful advancements in areas where TenneT is known as pioneer. The offshore 2GW Program or Target Grid are leading examples.

"TenneT remains fully committed to executing the investment plans in both the Netherlands and Germany"

Our profile

Who we are



"Our role is to ensure a secure supply of electricity to over 43 million end-users, in the Netherlands and a large part of Germany."

We are a Transmission System Operator (TSO)

With over 25,000 kilometres of high-voltage connections both onshore and offshore, our role as a Transmission System Operator (TSO) is to ensure a secure supply of electricity to over 43 million end-users, in the Netherlands and a large part of Germany, and to create the infrastructure needed to secure supply today and tomorrow.

Our end-users
End-users served

43 mio+

Our people
Number of colleagues

9,693

Number of nationalities

91

Our assets
Kilometres of high-voltage connections operated

25,000+

Pylons for energy transmission owned (approximately)

28,000+

Substations operated

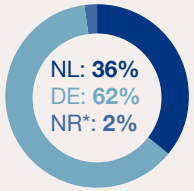
485

Underlying revenue (EUR million)

8,430

Underlying EBIT (EUR million)

1,745



* NR = non-regulated

Our profile

What we do

TenneT as a European investor

TenneT is one of Europe's largest investors in national and cross-border electricity transmission capacity on land and at sea, bringing together the Northwest European energy markets and efficiently unlocking large-scale renewable electricity sources. We collaborate with a wide range of partners in the energy market to develop and apply new, smart technologies and to contribute to the energy transition in the future.

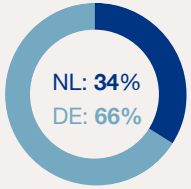
Our offshore assets

Offshore connections

19

Installed offshore capacity

12.2 gigawatt



Interconnectors operated

17

International connections (interconnectors) in kilometres

1,788

"We bring together the Northwest European energy markets and efficiently unlock large-scale renewable electricity sources."

Our profile

Our core tasks

Our core tasks, based on the Dutch and German energy legislation

Our primary tasks are to provide power transmission services, system services and facilitation of the electricity market. These tasks follow from our role as grid operator under the Dutch - 'Elektriciteitswet 1998' (E-wet) - and German - 'Energiewirtschafts-gesetz' (EnWG) energy laws, based on three pillars:

Transmit electricity Power transmission services mean that our role is to transmit electricity via our electricity system. We transmit electricity from where it is generated, either on land or at sea or imported from other markets. As electricity is often generated far away from where it is used, we need to transmit it over large distances without incurring major losses on the way. To achieve this, we transmit electricity at high voltages. Electricity is transmitted to our customers via our transmission system, being 110 kV and higher in the Netherlands and 220 kV and higher in Germany.

Provide system services System services refer to our role in carefully managing the balance between the supply and demand of electricity and to keep the frequency at a constant level (50 hertz). To do this, we have control centres in the Netherlands and in Germany, where supply and demand are monitored and controlled 24 hours a day, seven days a week providing security of supply.

Facilitate markets In addition, we ensure that European electricity markets are set up in an efficient manner, enabling a liquid market where consumers can rely on security of supply at an affordable price. To this end, we build and operate for instance interconnections (such as NorNed, NordLink, BritNed, COBRAcable and we are preparing LionLink, a hybrid interconnector), to import and export electricity. We also work together with other European TSOs and electricity markets to guarantee grid reliability and to balance supply and demand across borders and markets.

Our profile

How we do it

We drive the energy transition

The energy system is increasingly dependent on renewable sources. But renewables are, by nature, intermittent – the sun does not always shine, and the wind does not always blow. This calls for a change in the system. TenneT, together with its stakeholders, is working to address these challenges, to safeguard the balance between supply and demand in the future. We build grids that integrate new energy sources, for example with the battery-storage of electricity, and unlock flexibility, both onshore and offshore.

Our carbon footprint in absolute figures

Total GHG emissions location based

4,702,180 $tCO_2eq.$

Total GHG emissions market based

2,699,516 $tCO_2eq.$

Our carbon footprint in relative figures

Greened carbon footprint

43%

"We build grids that integrate new energy sources and unlock flexibility, both onshore and offshore."

Our profile

Our climate neutral objectives

Our role in Europe: we drive the transition to a climate-neutral continent

By 2050, Europe aims to become the world's first climate neutral continent. TenneT, along with European governments and other energy parties, is key to making this ambition a reality. In the transition to a climate-neutral continent, the transition of the electricity system is an important element to ensure that society has a sustainable supply of energy. Governments in the areas we serve have formulated ambitions to support Europe's climate targets, with the German government aiming for climate neutrality in 2045 and the Dutch government in 2050.

Our long-term Target Grid vision: we strive for a climate-neutral energy system in 2045

As a key player in the energy market, we support the energy transition by sharing our insights to integrate and switch to more renewable energy sources to power society, while aiming to ensure that we are able to keep the lights on at all times. We are making sure that both offshore and onshore generated electricity can be integrated into the grid properly, for example by reinforcing, renewing and greatly expanding our grid. To reach these goals, we launched in 2023 our Target Grid vision, the long-term blueprint of our electricity grid, needed to operate a climate-neutral energy system in 2045.

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Trends and developments

As a TSO, TenneT operates at the heart of the energy sector, ensuring that the electricity which is increasingly generated from carbon-neutral sources (such as wind parks and solar farms) is connected to the grid and transmitted to our customers being large industries and distribution system operators (DSOs), which distribute electricity to the households in the areas we serve. Several trends and developments affect us in our daily work in a continuously changing environment and rapidly evolving energy landscape.

Increased discussion on affordability of energy

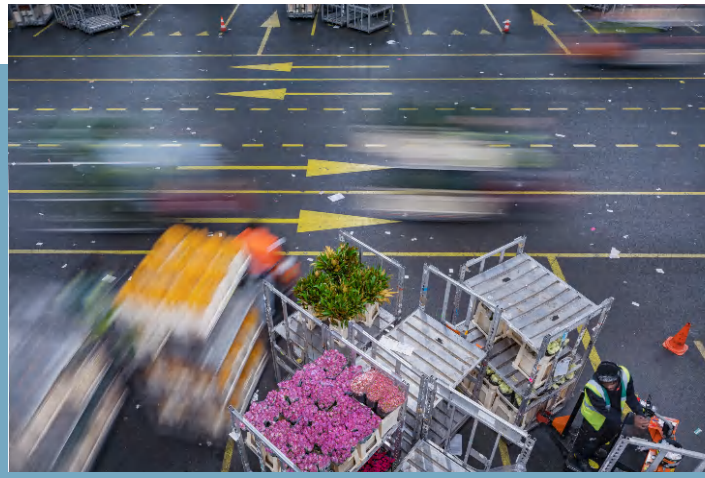
The energy transition is crucial for achieving climate goals, ensuring energy security and strengthening energy independence. The investments required to future-proof the electricity system are significant and will have a clear impact on the development of grid tariffs in the coming years. The question of how to allocate the cost related to transitioning to a climate-neutral electricity system without undermining the affordability of energy bills is at the heart of the current debate and also has to reflect the cost of non-investment. Further reference is made to the section Safeguard sustainable financial performance.

Enhancement of the energy system through innovation and digitalisation

Innovation and digitalisation offer new opportunities and can for example enhance monitoring and optimisation of transmission systems. As energy storage technologies advance, integrating these systems into the grid becomes vital for balancing supply and demand. Sustainability and innovation are important elements in our strategy and go hand in hand. As mentioned before, we cannot shape a sustainable future on our own but need the innovative brainpower of other companies. Through 'Open Innovation Programmes' we invite participants to work together on significantly reducing greenhouse gas emissions of extra-high-voltage substations over the entire life cycle.

Retain competitiveness for Europe through improved infrastructure

In a changing world with new challenges, the European Union is focused on staying competitive and prosperous. Europe is working hard to maintain its leadership globally and to make sure it has control over its own future. Therefore, Europe needs to look further ahead and set out how to remain competitive. Improving electricity infrastructure and strengthening cross-border connections can help drive progress and boost prosperity and competitiveness across Europe. This is also stated by former president of the European Central Bank Mario Draghi in his report on the future of European competitiveness at the behest of Ursula von der Leyen, president of the European Commission.



Decarbonisation needed to tackle climate change

Climate change is one of the most urgent and complex societal challenges of our time, of which many scientists explain the increased occurrence of weather extremes as being caused by climate change. To mitigate the most adverse impacts of climate change, governments need to step up their climate ambitions to build a net zero economy by 2050. A shift towards renewable energy sources and reduction of carbon emissions is crucial and TenneT's Climate Transition Plan outlines our roadmap to that future: we take steps to substantially reduce our emissions of greenhouse gases. In our risk management section we disclose our climate-related risks, mitigating actions and opportunities.

To ensure grid resilience and reliability, TSOs must prepare for extreme weather events and other climate-related challenges. Changing weather and climate patterns, such as storms, floods and droughts, can also affect our transmission system, which needs to be more resilient to a variety of different external circumstances.

Scarcity of human and material resources as a challenge

A key development and challenge we see as we drive the energy transition is the availability of key resources, such as raw materials, manufactured components and qualified staff.

Regarding the scarcity of human capital, difficulties in the labour market have occurred in many more sectors in the recent years. Recruitment of talent, which is needed to realise our investment portfolio and to achieve the goals of the energy transition, remains a key challenge for TenneT, especially as we are seeking talent alongside other employers in our sector.

TenneT is dependent on a large number of different materials to ensure future network capacity and to facilitate the energy transition. Geopolitical tensions, material scarcity leading to price volatility and less readily available materials are some of the external factors impacting TenneT in this capacity expansion. For TenneT, a circular economy is of vital importance to connect everyone with a brighter energy future. Overall, scarcity of resources may cause project delays, rising costs and, in the broader context, delay in meeting sustainability targets.

Growing demand and complexity of the energy system due to renewable energy

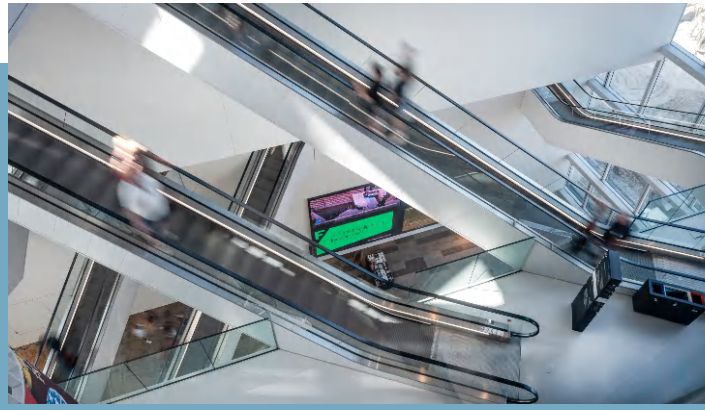
The growth in wind and solar energy and closure of coal and nuclear power plants have drastically changed the electricity system. Operating the system is becoming much more complex. Variability of electricity flows creates significant operating challenges for balancing, voltage control and stability. This strained grid is now undergoing the greatest investment in new capacity of all time. Due to the growth of renewables and the increased electrification, the demand for transmission of electricity over large distances is growing. All this also requires adjustments to the market model in the coming years.

In the Netherlands, the ever-increasing pace of demand for additional transmission and connection capacity is exceeding the speed at which we, and our colleague system operators, can expand the electricity system. Although work on the grid is advancing in all regions, the investments we are making, alongside additional measures, are still not enough to meet demand, at such short and often immediate notice.

System operators signal that the Netherlands is entering the next phase, where access to the electricity system will come under further pressure leading to pressure on both sustainability goals and economic development.

This calls for serious measures that facilitate acceleration of electricity grid expansion. In addition, grid operators and the government are taking additional measures to keep the electricity grid accessible and reliable. Examples include mandating smart charging stations, controllable heat pumps and mandatorily unloading the grid at peak times. The changing energy system also requires different behaviour from end-users, for example by using the grid more when the supply of electricity is high.

Also in Germany, we notice that due to numerous bottlenecks in the onshore electricity grid, power from large wind farms in the North Sea must increasingly be scaled back. More speed is therefore needed to expand the electricity grid, for example by building important DC connections, such as SuedLink.



Our purpose, promise and principles

TenneT has a clear purpose: to connect everyone with a brighter energy future. This summarises how we have to fulfil our three core tasks for society, while enabling the changing energy landscape with all its challenges, day in and day out.

Our core tasks consist of transmission of electricity, provision of system services and market facilitation. We are a key player in the energy landscape, working closely with our stakeholders to drive the energy transition and to ensure a green and bright energy future in the most cost-effective manner. With this, our promise is to light the way ahead together. We refine and achieve our tasks by working together with our partners and stakeholders. How we aim to get there is described in Our strategy.

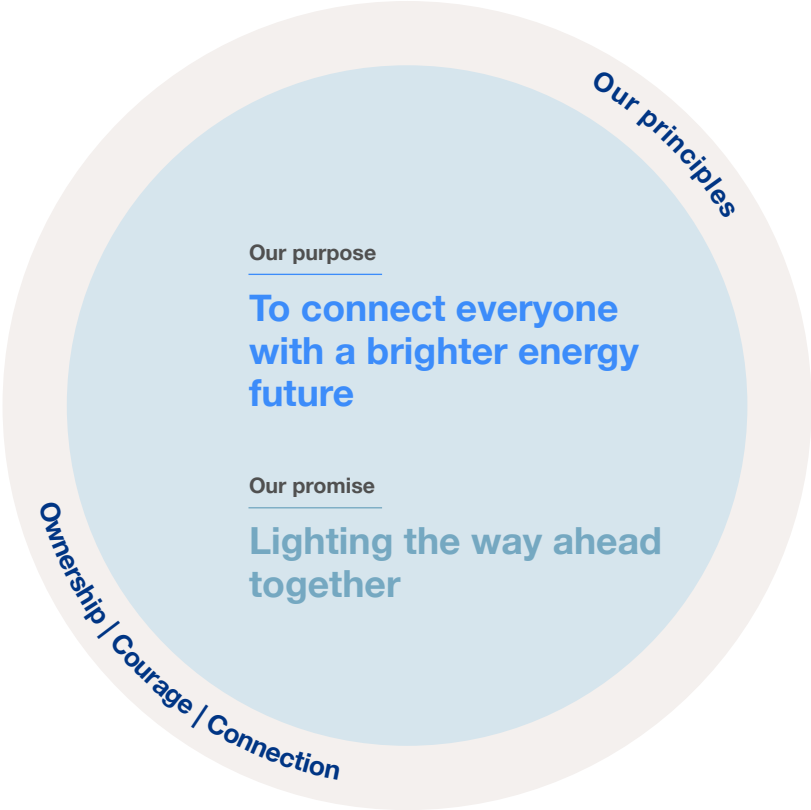
Our principles of ownership, courage and connection will continue to guide us in this context, giving us the confidence to be bold with our innovations, partnerships and ambition.

- **Ownership:** we are accountable for our words, actions and decisions. We take responsibility together, for our part of the end-to-end chain but also for ensuring that all the parts fit together.
- **Courage:** we are honest, open and clear about what we think. We dare to make bold decisions, take ambitious initiatives and are willing to learn from our mistakes.
- **Connection:** we are involved with and work actively with other parties. The challenge of the energy transition requires us to do things differently and collaborate with a wide range of partners. We know that we do not have all the answers ourselves.

These three principles are the key to working together across the organisation based on clear expectations and honest conversations and represent the necessary mindset and culture.

In translating our purpose and promise to a strategy, policies and actions that support us achieve our ambitions, we balance the effect of our decisions in terms of (i) affordability, (ii) reliability, and (iii) sustainability. This balance is reflected in how we aim to apply elements included in our boundary conditions. For example, when building grid infrastructure, we need to consider acceptable cost.

This is challenging as we also work together with our suppliers to reduce the environmental footprint of our procured assets by an Environmental Cost Indicator linked to Life-Cycle Analyses. The possible solutions might not relate to proven technologies, which poses more risks to our security of supply standards. We strive to find the right balance between all three elements.



Our strategy

We launched our Sharpened Strategy 2030, focused on delivering grid capacity in time for our customers and delivering the Target Grid by 2045. This is how we fulfil our purpose and promise.

To fulfil our purpose and with that, contribute to delivering the required electricity grid to help meet Europe's goal to become the first climate-neutral continent in 2050, we determined our course for the next 5 years in our sharpened strategy 2030. This helps us to meet our ambitious goals and our main strategic goal to deliver more grid capacity in time for our customers, which is required to connect everyone with a brighter energy future.

Our strategy therefore focuses on realising an affordable, reliable and climate-neutral future electricity system and it enables us to act as a key player in Europe's energy transition. In this way, we contribute to the mitigation of climate change and the UN Sustainable Development Goals (SDGs), predominantly SDG 13 via SDG 7 and SDG 9. The transmission infrastructure that fits this climate-neutral energy system is envisioned in our Target Grid for 2045 which was launched in 2023. Our Target Grid 2045 sets out what we expect this future system to be and which strategic actions are required to get there.

This is achieved by building the grid faster – both customer connections and transmission capacity –, by utilising the grid better and delivering together for our customers. We can only reach the required step change in output if we further streamline our end-to-end delivery processes, scale our digital capabilities and innovate with our partners. While focusing on delivering more grid capacity we adhere to our standards for safety, security of supply, quality, sustainability and financial health. Those standards function as boundary conditions for our business with clearly defined goals that must not be compromised.

We bring our strategy to life by translating our strategic priorities to goals and objectives for our core processes and business units, ensuring progress through our quarterly performance management cycle.

Collaboration and a focus on shared goals mean that everyone at TenneT will have a clear understanding of what each of us must do to contribute to delivering more grid capacity and to do so cost-effectively. It makes it easier to understand what is expected of us and helps measure our performance in terms of output and delivery.

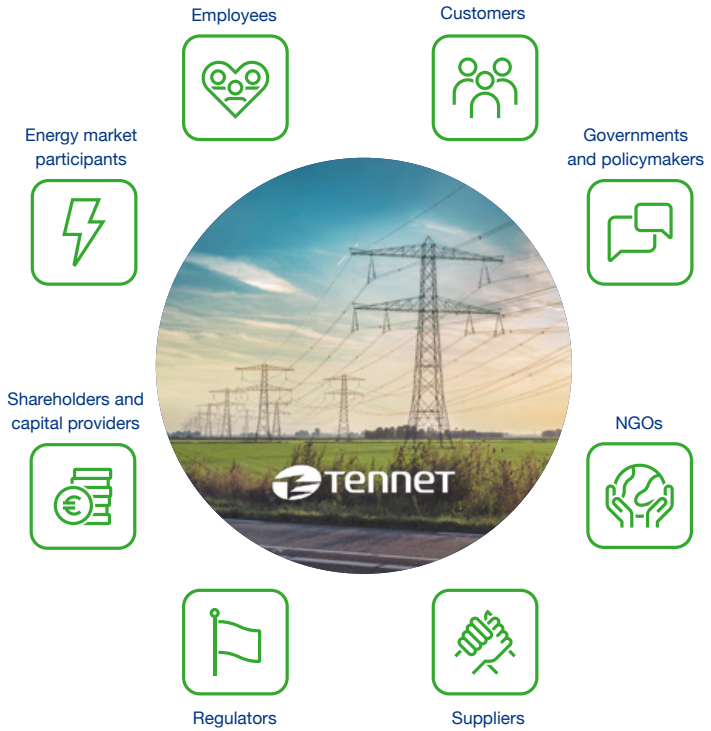
Our stakeholders

To act on our promise and ambitions, we believe that it is essential to deliver together with stakeholders and through partnerships. Through our activities as a TSO, we are already continuously interacting with the world around us. Our activities could not take place without the often intensive co-operation with other key players, inside and outside the energy sector. We aim to build and maintain good relationships with our stakeholders and co-operate with them in partnerships to deliver on our strategic objectives.

We determined our stakeholder landscape by identifying the most important stakeholder groups, based on their influence on us and our influence on them. We also engaged with these stakeholder groups to gather their views on the Sustainable Development Goals (SDGs) that relate most to us as an organisation and the topics related to the impact we as TenneT have on the world around us.

To monitor the way we are perceived and how we are performing, we do various reputation surveys among our key stakeholders. This year we conducted the first regional reputation survey, which provided us with important feedback on how our organisation is perceived in the regions. The results of this survey indicate that there is room for improvement, particularly in terms of transparency in our information provision and our flexibility in adapting to local circumstances. The results have been shared and discussed with the Executive Board and the Senior Leadership Team. Based on the insights gained, several improvement actions have been defined. TenneT is investing more in personal engagement, better investigation and more integrated coordination with stakeholders regarding projects, as well as ensuring consistent communication. This survey will be repeated in 2025.

Engaging with our stakeholders is crucial in achieving our strategic goals and to fulfil our role in society. In addition to the stakeholder groups mentioned hereafter, we also value the engagement with local communities in our service areas and specifically in the areas where our assets are located, now and in the future. This year we invested in our stakeholder management on regional and local level, as this is where the energy transition impacts society and the environment. One of the ways we do this is through Energy Boards: a partnership between regional governments and grid operators in the Netherlands to jointly work on solutions to grid congestion.



In some regions this allows us to jointly address the bottlenecks and thereby prevent delays or even speed up projects. Every quarter, the status of the joint projects and co-operations are summarised in our Province Monitor.

During stakeholder dialogues (such as workshops, webinars or events) we actively engage with local stakeholders and address any concern they might have regarding our projects. Moreover, we aim to engage with communities in our service area regardless of pending or planned projects to inform them about the societal role of TenneT. By informing local stakeholders about our role to secure electricity supply and driving the energy transition, we can emphasise the social and collective importance of the work we do.

These dialogues will help us to build and maintain the critical infrastructure required to facilitate the energy transition. It remains crucial to engage with local communities, but also with NGOs and politicians at the earliest stage of a project to address their concerns and gain understanding. As we expand our high-voltage grid, we must do so responsibly, by engaging with local communities and gaining their acceptance.

Stakeholder group	Examples	Method of engagement
Customers	• DSOs • Large industries	Informative, close involvement in various areas and contractual agreements, customer survey, customer day, relationship management
Governments and policymakers	• European Commission • National and regional parliaments (ministries) • Local authorities	Province Monitor and regional reputation survey, meetings like Energy Boards
NGOs	• Think tanks • Industry associations • Other NGOs	Informative, co-operative consulting and involvement on project level, partnerships
Suppliers	• Contractors • Vendors • External service providers	Market consultations, pre-qualifications, negotiations, meetings, supplier day
Regulators	• ACER • BNetzA • ACM	Informative and close involvement, regular meetings
Shareholders and capital providers	• Dutch Ministry of Finance • Investors • Project shareholders • Relationship banks	Regular meetings, bilateral meetings. shareholder meetings, roadshows
Energy market participants	• Energy producers • Other TSOs and DSOs • Market parties	Close involvement, regular meetings
Employees	• Our employees • Employee representatives • Labour unions	Quarterly employee meetings, employee survey, periodic meetings with employee representatives

How we create value

How we create value

As a company with a clear societal task, we strive to create value for our stakeholders. For instance, for our customers and for our end-users, to enable them to create value themselves. We have an important role to play as a secure supply of electricity is essential in enabling them to do so. The way that we create value is represented visually on page 28, using the concept of value creation as described by the International Integrated Reporting Council (IIRC), which together with the Sustainability Accounting Standards Board (SASB) formed the Value Reporting Foundation. By means of the six capitals defined by this framework (produced, intellectual, social & relationship, human, natural and financial) we describe our inputs, outputs, outcomes and impacts. As in previous years, this model serves as the basis of our Integrated Annual Report. As a company that is deeply rooted in society, the engagement and interdependencies with our stakeholders are at the basis of how we can create value. In addition, our inputs, through which we create impact for society, are influenced by how we add value through the way our colleagues bring our strategy to life, driven by our purpose and principles, which have been described in the Our purpose, promise and principles and Our strategy sections. While conducting our core activities as a TSO, our decisions are always influenced by the balancing act of affordability, reliability and sustainability.

More information on the specific inputs, our related outputs, outcomes and impacts are disclosed in subsection 'Our performance in 2024', in each of the respective chapters. The way that we aim to create long-term value is defined alongside the six outputs from our value creation model, as described in the visual on page 28.

Building the electricity grid of tomorrow

Electricity plays a vital role in the lives of our stakeholders and society. TenneT designs, builds and maintains the high-voltage onshore and offshore grid that is needed to secure supply of electricity. Our produced capital relates to the components of our grid, such as our cables, substations, pylons and interconnectors. We realise the grid that supports today's electricity needs as well as enable the energy system of the future.

Utilise the grid to empower society

Our core task is to secure the supply of electricity now and in the future and hereby supporting the daily lives and activities of people and businesses in the areas we serve. Equipped with decades of experience in operating our grid, together with a vision of how the future grid and electricity markets should be designed, we strive to utilise the grid in the best way possible to be able to deliver together for our customers. This expertise and knowledge are our intellectual capital.

Deliver more grid capacity together for our customers and to serve society

We are convinced that collaborating with stakeholders and creating strong partnerships with them are essential to being able to meet our strategic goal to deliver grid capacity in time for our customers and bring our Target Grid 2045 vision to life. By combining experience and knowledge from different organisations inside and outside the energy sector, we achieve our strategic objectives.

Create a safe and inspiring workplace

We consider our people to be our most important asset, as they enable us to deliver on our strategic ambitions and create value for society. To this end, we aim to offer a safe, sustainable and inclusive place to work for all our employees. Our programmes and actions focus on creating an inclusive and energising environment where people can thrive.

Transition to a brighter energy future within social and planetary boundaries

As a company at the centre of the energy sector, we have an important role to play to help achieving the climate targets the governments in the areas we serve have committed themselves to. We do this by contributing to a sustainable energy system, where we are able to connect everyone in our service area to green electricity. Simultaneously, we are aware that in our journey to get there, we must strive to do so within social and planetary boundaries, ensuring we realise the electricity grid of the future in a responsible and future-proof manner. This relates to our impact on the planet via our carbon emissions, our impact on the natural environment, the materials we need to build, operate and maintain our grid and from a social perspective also the way we are respecting human rights for our people and workers in the value chain.

Safeguard sustainable financial performance

In order to create long-term value, we are focused on maintaining our financial health. Our main sources of financing are our regulatory revenue and externally raised capital. To safeguard our financial health, we aim to optimise our financing costs and deliver a return on capital that meets the expectations of our capital providers. For this, it is essential to maintain strong credit and environmental, social and governance (ESG) ratings.

How we create and measure societal impact

The way we are able to transform inputs to outputs does not merely enable us to create outputs on the short-term. It also enables us to create medium and long-term societal effects: our outcomes and impacts. Our aim is to reduce our negative and increase our positive outputs, outcomes and impacts. With the role and scale we have as a company, we are aware that we have societal impacts, both negative and positive. As a state-owned company, serving society in the Netherlands and a large part of Germany, we have significant societal impact by (em)powering society when we are able to secure supply of electricity, together with the help of other partners in this part of the value chain, such as DSOs and partners in generation of electricity. In addition, we are an important player regarding these service areas to help their governments in delivering the energy transition, helping to avoid emissions by enabling a greener electricity mix and helping large industries and households to receive green electricity.
In addition, we are conscious that the costs we incur also have an impact on our customers and their end-users. For more details on how we performed, please refer to the 'Our contribution to the SDGs' section and the respective chapters in 'Our performance 2024'

We believe that these impacts are not the result of one output or capital and therefore choose to connect them to all outputs and to the sustainable development goals we contribute the most to. We feel that these are our material societal impacts to report on.

Measuring these impacts remains a journey as it is subject to estimations and assumptions, We continue on this journey to refine our methodology. Insights gained with respect to these impacts help us see the extent to which we are meeting our strategic goals and the extent to which we can fulfil our purpose to connect everyone with a brighter energy future. Reporting on the equivalent number of households that in theory can receive 100% green electricity because of our work, provides us with this information.

Our aim is to disclose the outcomes and impacts which we, as a European TSO, create on a societal level. This provides insights from a broader perspective on how the people living in the areas we serve experience the positive or negative impacts we create and have on them. By focusing on these impacts, we believe that we provide more meaningful insights for stakeholders. All of our impact indicators are also included in the Sustainable Development Goals section in this report.

Value Creation Model

Our inputs

Produced
Cables, lines, substations, offices and interconnectors

Intellectual
Extensive knowledge of and experience with operating the system and integrating energy markets

Social & Relationship
Strategic partnerships and our engagement with (project) stakeholders

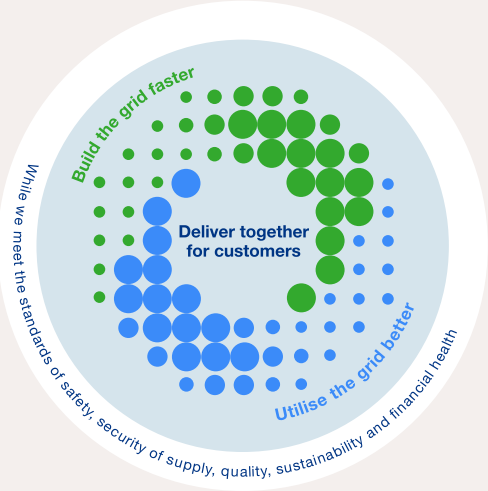
Human
Our skilled and motivated employees

Natural
Energy, natural environment and materials to build, maintain and operate our grid

Financial
Regulatory revenue, (Green) Financing

How we create value

Our purpose
To connect everyone with a brighter energy future
Our promise
Lighting the way ahead together
Our strategic goal
Deliver grid capacity in time for our customers



Strategic foundation
Corporate governance
Corporate risk management and internal control

Our outputs

Produced
Building the electricity grid of tomorrow →

Intellectual
Utilise the grid to empower society →

Social & Relationship
Deliver together for customers and for society →

Human
Create a safe and inspiring workplace →

Natural
Transition to a brighter energy future within social and planetary boundaries →

Financial
Safeguard sustainable financial performance →

Our outcomes & impacts

Our societal financial impact on an average household in our service area.

Equivalent number of households that in theory would have been able to receive 100% green electricity

Societal impact due to availability of our grid

Avoided CO_2 emissions

Value chain and impacts

Our value chain

As a transmission system operator, our core task is to provide a secure supply of electricity to the more than 43 million end-users in our service area. We can not do this merely by ourselves. It takes each and every part of our value chain to ensure that (large) industries and end-users are able to receive electricity. We can only deliver together and not without the other stakeholders that contribute to the electricity system. In addition, designing, building and maintaining a future-proof electricity grid is of equal importance to maintain the security of supply today and tomorrow. That part of our value chain entails all parties that are involved in the supply, manufacturing, construction or deconstruction of materials used for our grid. The part of the value chain related to transmitting electricity includes parties that are, either on the demand or the supply side, involved with the production, exchange or consumption of electricity. In the visual hereafter, our main value chain partners are represented.

Our material impacts

The impacts we create are located at various stages of our value chain(s). For instance, impact related to the opportunity to contribute to a future-proof and brighter energy system and realising this in line with our Target Grid 2045 vision. At the same time, we also need to make sure that our customers today are able to have a secure supply of electricity. But in doing so, we need to be mindful of social and planetary boundaries. Realising this future-proof electricity grid also means that we need to do this in a responsible manner. This means ensuring the safety of our people and also those who work together with us, such as workers in the value chain, is safeguarded. This safety helps us to ensure we have sufficient and the right talent to support us in realising our strategic goals, besides being an employer of choice in order to attract sufficient and the right people. Also, we need to ensure that we limit our environmental impact in designing, building, maintaining and operating the grid, for instance with the materials we use.

Deliver together for customers

To enable us to deliver additional grid capacity for our customers better and faster, we aim to find solutions together with stakeholders. Stakeholder engagement is a strategic focus area for us and a mindset we aim to apply in finding these solutions. For instance in ensuring we can connect more customers to our grid, we work together with governments and customers and develop new ways of customers being connected, such as with agreeing the first flexible contract with our customer GIGA storage. Also we are working together with other TSOs to realise new interconnections, like LionLink, which increases our ability to import and export electricity that helps strengthen British, Dutch and European security of supply. Furthermore, we also work together with suppliers to realise our offshore portfolio in the 2GW Program to create Europe's clean energy powerhouse of the future. Offering this combined portfolio creates more clarity and certainty for market parties, reducing societal costs and increasing our ability to deliver these projects in time together with these stakeholders.

Connecting the dots

All concepts related to our impacts, our strategy and how we contribute to the Sustainable Development Goals are not isolated from each other. They are linked to each other. Identifying our key impacts and it's risks and opportunities in line with the requirements set by the Corporate Sustainability Reporting Directive, helps us to identify where to focus on and maximise our positive impacts and opportunities and minimise our risks and negative impacts. These should be linked to the key strategic goals that we identified and how we manage our outputs, outcomes and impacts. To do this, monitoring how the policies and actions that we have set can be evaluated via clear targets and metrics to ultimately not only create outputs, but also outcomes and impacts. How this ties together has been depicted in the next section: our Connectivity table.

TenneT's value chain

Generation / Infeed grid 1 2 13

Raw material extraction and production of materials 1 7 10
In building and maintaining our grid, we make use of materials, to deliver a greener energy system and in a way where we reduce our impact on the planet. Some of these materials are becoming scarcer than others.

Construction 2 9 10
Safety is of vital importance when working with heavy machinery and high voltage equipment when building and maintaining our grid.

Our core activities
1 2 7 8 9 10 13

By creating efficient markets that support our task to transmit electricity to our customers, we aim to make our grid future proof. Our core activities are related to the three pylons as it is the centre of both axes.

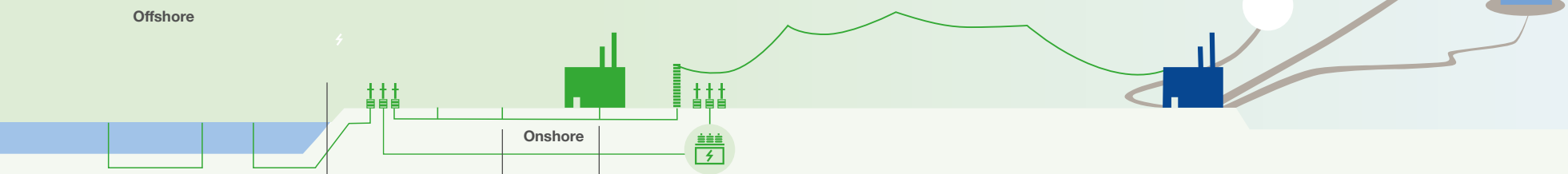
Transmitting electricity | **Facilitating the market** | **Maintaining the energy balance**

Consumption 2 13

Prosumers
In a society that is becoming more and more electrified, we supply households with electricity together with the DSOs and work with them for the system-serving and grid-serving integration of flexible prosumers.

Export
We transport electricity to other areas if this helps them secure supply in a consistent or more cost-efficient way.

Large industries
More and more large industries are greening their processes which results in a higher electricity demand. As a partner for industries, we therefore play an important role in the transition to a climate-neutral economy.



Renewables
More offshore wind farms are connected to our grid.

Renewables
Onshore, we aim to create more capacity to enable more renewables to be connected directly to our grid, DSOs or new technologies that enable flexible solutions.

Import
We import electricity to balance our grid which can also save societal costs.

Power plants
Conventional power plants are still in the mix, but are increasingly being phased out by governments in the areas we serve.

Recruitment and retention of employees 8
To achieve our strategic objectives we need to hire and retain the right and sufficient employees. At the same time, our supply chain partners also need sufficient personnel to help us deliver on the energy transition.

Decommissioning 7 9 10
In our projects, we strive to re-use our materials as much as possible or dispose of them in a proper way.

Our impacts, risks and opportunities in the supply chain

Environment
- 1 Climate change
- 2 Delivering the energy transition
- 7 Resource use and circularity

Social
- 8 Good employment
- 9 Safe working environment
- 10 Responsible supply chain practices
- 13 Security of supply

Connectivity table

Material topics	Capital	Link to corporate strategy	Page	Key KPIs	Target	Performance 2024	Performance 2023	SDGs
2 **Delivering the energy transition (E1)**	Produced	Strategic focus area **'Building the grid faster'**	35	• CAPEX investments (EUR mio) • KM's lines built • Newly installed GW offshore • # connections realised • # connection requests	10,919 261 0.0 GW 36 N/A	10,637 245 0.0 GW 40 728	7,730 N/A 2.3 GW N/A N/A	8, 9
13 **Security of supply (Entity specific)**	Intellectual	Strategic focus area **'Utilising the grid better'**	44	• Grid availability onshore • Grid availability offshore	99.99962% 95.07%	99.99988% 97.09%	99.99993% 97.90%	9
	Social & Relationship	Strategic focus area **'Deliver together for customers'**	51	• Number of initiatives	N/A	30	27	
8 **Good employment (S1)** 9 **Safe working environment (S1)** 10 **Responsible supply change practices (S2)**	Human	Strategic focus area **'Deliver together for customers'**	60	• TRIR • Absentee rate • % female inflow • Supplier visits • % Non-Dutch/non-German hires	3.7 3.0%[1] 32% N/A 10%	4.0 NL 3.6 / DE 3.3 32% 77% 11%	4.5 NL 3.9 / DE 3.4 32% 82% 11%	5, 7
1 **Climate Change (E1)** 7 **Resource use and circularity (E5)**	Natural	**Boundary condition**	68	• Own Carbon footprint (Scope 1, 2 and 3 tCO2eq, market-based) • Resource inflow (% virgin materials procured) • Resource outflow (waste metrics)	N/A N/A N/A	2,699,516 2% 97%	3,377,736 N/A 75-90%	12, 13
	Financial	**Boundary condition**	78	• Underlying EBIT (EUR mio) • Adjusted FFO / net Debt • ROIC	1,680 8.0% 4.3%	1,747 8.2% 4.7%	1,817 11.6% 5.8%	7

[1] No target value for absentee rates, however a value TenneT strives for.

Our contribution to the SDGs

The Sustainable Development Goals (SDGs) are a set of 17 global objectives established by the United Nations to tackle pressing issues by 2030. They encompass diverse challenges, from poverty eradication and quality education to climate action and gender equality. They serve as a universal roadmap for governments, businesses, and communities to work together, promoting peace and prosperity for people and the planet, now and into the future. TenneT wholeheartedly supports all global goals, while – considering our main business – we are specifically committed to three main SDGs.

Ensure access to affordable, reliable, sustainable and modern energy for all

7.1 By 2030, ensure universal access to affordable, reliable and modern energy services
7.2 By 2030, increase substantially the share of renewable energy in the global energy mix

As TenneT's entire business revolves around affordable and clean energy, we can have a profound influence on SDG 7. We have developed an impact indicator that quantifies the financial impact we have on the average electricity bill of households in the Netherlands and Germany. Furthermore, we track our impact by measuring the gigawatts of renewable energy connected to our grid. Our efforts are evident in the offshore wind capacity connected, aligning with the renewable energy ambitions of the governments in our service areas.

Target	KPI	Contribution 2024	Contribution 2023
7.1	Societal financial impact on households in our serving area	**NL: 22.7%** **DE: 10.8%**	NL: 8.7% DE: 4.3%
7.2	Equivalent number of households that in theory would have been able to receive 100% green electricity	**NL: 8.9 mio** **DE: 6.3 mio**	NL: 8.2 mio DE: 6.1 mio

Build a resilient infrastructure, promote inclusive and sustainable industrialisation and foster innovation

9.1 Develop quality, reliable, sustainable and resilient infrastructure, including regional and transborder infrastructure, to support economic development and human well-being, with a focus on affordable and equitable access for all.

SDG 9 is another key area where our operations make a substantial contribution. Our impact is measured through an indicator of how the availability of our grid has a q uantifiable value for society (through electricity delivered). Additionally, our role in creating interconnections facilitates efficient electricity trade, ultimately lowering costs for end-users. This fosters market development and aligns with the goal of building resilient infrastructure and promoting inclusive and sustainable industrialisation and innovation.

Target	KPI	Contribution 2024	Contribution 2023
9.1	Societal value of the availability of our grid	**> GDP of the Netherlands**	> GDP of the Netherlands

Take urgent action to combat climate change and its impacts

13.2 Integrate climate change measures into national policies, strategies and planning

The consequences of climate change are tangible and as a cross border TSO and key player in the energy transition, we can help mitigate the effects by contributing to a climate neutral future energy system. With our business choices and conduct we have a positive, but also negative impact: We measure our greenhouse gas emissions (GHG) against Science Based Targets Initiative-approved targets and also report the amount of avoided emissions. Detailed information on the topic of Climate Change is outlined in the Environmental chapter of our Sustainability statements.

Target	KPI	Contribution 2024	Contribution 2023
13.2.2	Total greenhouse gas emissions (Gross, market-based)	**2,699,516 tonnes CO_2eq**	3,377,736 tonnes CO_2eq
13.2.2	Total avoided emissions (in mio tonnes)	**NL: 10.0** **DE: 8.2**	NL: 9.7 DE: 8.3

Other SDGs

In the execution of our activities, we also have an impact on other SDGs. We contribute to SDG 5 and SDG 8 when we look at policies relating to our people (including our contractors). Our impact and management of these topics is also reflected in our Social chapter of our Sustainability statements regarding our own workforce (S1) as well as workers in the supply chain (S2). With respect to the choices we make that affect our planet, we contribute to SDG 12, SDG 14 and SDG 15. SDG 12 relates to our circularity ambitions, which also influence climate change. More details on our Circular Economy Strategy are outlined in the Environmental chapter of our Sustainability statements.

Target	KPI	Contribution 2024	Contribution 2023
5.5	% of female board members	**40%**	46%
8.8	Total Recordable Incident Rate	**4.0**	4.5
12.2	% circular inflow % circular outflow	**2%** **97%**	 75-90%

Ensure access to affordable, reliable, sustainable and modern energy for all

As TenneT's entire business revolves around affordable and clean energy, we can have a profound influence on SDG 7. We have developed an impact indicator that quantifies the financial impact we have on the average electricity bill of households in the Netherlands and Germany. Furthermore, we track our impact by measuring the equivalent number of households that in theory would have been able to receive 100% green electricity in the areas we serve. Our efforts are evident in the offshore wind capacity connected, aligning with the renewable energy ambitions of the governments in our service areas. This impact indicator is based on the green electricity that we are able to directly connect to our grid. Note that currently with these volumes in 2024 the theoretical amount of households that have been able to receive 100% green electricity has surpassed the actual amount of households in the Netherlands. As green electricity is consumer by both households and industries, this outcome explains this situation. For next year, we are looking into updating our methodology to account for this.

Build a resilient infrastructure, promote inclusive and sustainable industrialisation and foster innovation

SDG 9 is another key area where our operations make a substantial contribution. Our impact is measured through an indicator of how the availability of our grid has a quantifiable value for society (through electricity delivered). Additionally, our role in creating interconnections facilitates efficient electricity trade, ultimately lowering costs for end-users. This fosters market development and aligns with the goal of building resilient infrastructure and promoting inclusive and sustainable industrialisation and innovation.

Take urgent action to combat climate change and its impacts

The consequences of climate change are tangible and as a cross-border TSO and key player in the energy transition, we can help mitigate the effects by contributing to a climate-neutral future energy system. With our business choices and conduct we have a positive, but also negative impact: We measure our greenhouse gas emissions (GHG) against Science Based Targets Initiative-approved targets and also report the volume of avoided emissions. Detailed information on the topic of Climate Change is outlined in the Environmental chapter of our Sustainability statements.

Other SDGs

In the execution of our activities, we also have an impact on other SDGs. We contribute to SDG 5 and SDG 8 when we look at policies relating to our people (including our contractors). Our impact and management of these topics is also reflected in our Social chapter of our Sustainability statements regarding our own workforce (S1) as well as workers in the value chain (S2). With respect to the choices we make that affect our planet, we contribute to SDG 12, SDG 14 and SDG 15. SDG 12 relates to our circularity ambitions, which also influences climate change. More details on our Circular Economy Strategy are outlined in the Environmental chapter of our Sustainability statements.

Our performance 2024

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Utilise the grid to empower society 44
Deliver more grid capacity together for our customers and to serve society 51
Create a safe and inspiring workplace 60
Transition to a brighter energy future within social and planetary boundaries 68
Safeguard sustainable financial performance 78

Building the electricity grid of tomorrow

In our role as a Transmission System Operator (TSO) we design, build, maintain and operate over 25,000 kilometres of high-voltage electricity grid in the Netherlands, large parts of Germany and across borders. Ensuring a future-proof electricity grid is essential to the strength of the European economy and achieving Europe's climate goals.

Investments (EUR million)	**Target**
10,637	**10,919**
NL: 3,783 | DE: 6,852 | NR[1]: 2	
2023: 7,730	
2022: 4,493	

# connections realised	**Target**
40	**36**
NL: 40 | DE: 0	

# connection requests	**Target**
728	**N/A**
NL: 624 | DE: 104	

Circuit length (in kilometres)	**Target**
245	**261**
NL: 59 | DE: 186	

Newly installed GW offshore	**Target**
0.0 GW	**0.0 GW**
2023: NL: 1.4 | DE: 0.9	
2022: NL: 1.4 | DE: 0.0	

[1] NR = non-regulated

Introduction

In order to deliver grid capacity in time for our customers with the aim to ensure the transition to a climate-neutral energy system by 2045, TenneT has a clear focus to accelerate and help meet the climate targets set by the governments in the areas we serve. Just two decades away from this destination, TenneT must move full speed ahead, implementing our planned investments in both the Netherlands and Germany. To be able to deliver the energy transition, we have set our Target Grid 2045 vision, translated into our sharpened strategy 2030, which shows what we must deliver and by when. To ensure we have the necessary infrastructure ready by 2045, the Target Grid is based on scenarios with the highest level of electrification. This plan is however regularly adjusted over time in line with the changing demands of society and policy changes. How we invest in accordance with the Target Grid vision in the next 10 years is included in our the NetzEntwicklungsPlan (NEP) in Germany and the onshore and offshore investment plans (IP's) 'Net op Land' and 'Net op Zee'.

A clear focus on delivery and execution is key to ensuring that our grid has the necessary capacity for the short-term and long-term future, meeting the fast-growing demands on our grid to power essential services of the economy, such as transport, industry, healthcare, heating, housing and trade.

To accelerate our output and focus the full capability of TenneT on delivering grid capacity in time for our customers and society and delivering the energy transition in line with the Target Grid vision, we have sharpened our strategic focus and defined three strategic focus areas (please refer to Our strategy). One of these relates to ensuring that we build the grid faster.

While focusing on delivering the necessary infrastructure on time, we need to consider smarter ways of working to increase our speed. During execution of our delivery plan, we feel committed and responsible, also from a compliance perspective, to secure our standards for safety, security of supply, quality, sustainability and financial health.

To meet the expectations of society, politicians, customers and other end-users, we cannot rely solely on organic growth of the TenneT organisation and conventional ways of working. We must work smarter and more efficient, with new and non-linear solutions, grid-enhancing technologies and stronger partnerships. To make maximum use of the capacity of our grid, we must also be prepared to consciously stretch the capabilities of our system. We have already achieved a lot with improving the speed of our delivery. However, our delivery rate has to further increase to meet societal demand for the energy transition.

> "We aim to build more customer connections, increase grid capacity, maintain our grid smartly and build at acceptable costs."

That is why, in realising a future-proof electricity system for our customers and society, we are focusing on faster delivery. In doing so, we aim to build more customer connections and increase grid capacity, while maintaining our grid smartly and building at acceptable costs.

How we managed this topic in 2024

We reached important milestones during 2024, including the green light for the system operators' Investment Plans in the Netherlands and Germany. In April, the Dutch grid operators published their Investment Plans. These plans give the regulator ACM, the ministry of Climate Policy and Green Growth, governments and market players more insight into the planned investments and projects for the next 10 years.

The Dutch Investment Plans include grid extensions, replacement investments, new customer connections, connection systems for offshore and reconstruction projects. Among others, TenneT will develop five larger new 380 kV high-voltage connections over the next ten years and will modernise 140 high-voltage substations.

In Germany, the four German grid operators, presented their Grid Development Plan (NEP) 2037/2045 to the Federal Network Agency (BNetzA). The current NEP contains scenarios for the years 2037 and 2045 and describes for the first time an electricity transmission grid for a climate-neutral energy system.

While continuing with the design and construction of projects in these national plans, we also continued to invest significantly in maintenance, ensuring that our existing electricity grid is in a good condition to support the grid of tomorrow and to deliver grid capacity in time for customers.

Smartly maintaining our grid

Our maintenance programme is essential to maintain our current grid capacity and to be able to deliver more capacity and meet the needs of customers and society. Regular maintenance of the infrastructure, which we aim to do in the best possible way, helps to minimise the risks of power failures, damage to the environment and safety incidents. Preventive maintenance helps to ensure our assets continue to perform in accordance with their intended function with a full lifetime of service, while fast action on corrective maintenance minimises downtime in the grid. Maintaining a specific section within our grid requires the grid to be switched off – known as planned outages. As the grid operates close to maximum capacity, and with more unpredictable power flows, it becomes increasingly difficult to find windows for planned outages.

Especially all developments in the energy sector and the transition to a climate-neutral economy make it more complex for us to maintain the current levels of grid availability. This requires us to reconsider our approach to risk, which may impact our ability to secure supply. Therefore, we increasingly prioritise our maintenance activities for our assets based on an assessment of their potential failure and the associated consequences. We use this approach to plan optimal maintenance schedules and identify the most critical components in the system, calculating when intervention is needed and when it can be safely delayed. We also take this approach with financial responsibility and affordability in mind, balancing the financial impact of maintenance against the value for society.

During 2024, we boosted the efficiency and effectiveness of our maintenance work with the continued application of our workforce management system, in which our field maintenance teams use mobile devices linked to a central database to log and monitor performance data across the network. This approach helps our teams assess maintenance key performance indicators monthly. As a result of these insights, we aim to carry out fewer but targeted inspections, perform less preventive maintenance work in general, but

more where necessary, and only replace equipment if that is the most efficient option. This smarter and more risk-based approach to maintenance is not only more cost-efficient but also reduces our impact on the environment, with fewer interventions needed.

We are always looking for innovative ways to improve the efficiency of our inspections. In 2024, we tested the use of remote-controlled site inspection technology, including the use of drones to scan onshore and offshore assets as a safer, cheaper, more flexible and efficient alternative to helicopters and sea vessels. Drones are particularly useful for checking overhead lines, as the line does not need to be taken out of service for the inspection, thereby maintaining grid availability. In the Netherlands, we are also testing the use of robotic 'dogs' to perform daily routine maintenance inspections. The dog takes remote-controlled walks around onshore assets, such as substations, to take pictures and perform thermal imaging. In addition, we are making more use of smart sensors, installed in high maintenance 'hot spots' in the grid, to alert us to required intervention. We are installing more sensors in the grid when we perform replacement and upgrade works. Not only do these allow us to monitor the grid for maintenance, but these sensors also help us optimise and steer load on a daily basis.

As can be seen onshore in our Dutch substation-focused Bay Replacement Programme and offshore in the 2GW Program, the standardisation of equipment and assets is designed to increase the speed and efficiency of our maintenance work in the future, making it easier and more efficient to fit and maintain assets that share common design and components. The modules can also be tested and configured in a controlled environment before installation.

Offshore, the efficiency of our maintenance work in 2024 was improved by the introduction of new digital workflow management tools, as part of the GO4IT project. New digital Travel & Journey Management and Permit to Work (PTW) system tools were adopted by offshore maintenance teams, helping to optimise resource utilisation, risk assessments, reporting and safety. The digital PTW system will also be introduced onshore during 2025.

Building more grid capacity

During 2024, we made significant progress in building more grid capacity, investing a record EUR 10,637 million in the Dutch and German grids, onshore and offshore. An increase of 38% compared to 2023 (EUR 7,730 million) and nearly on target. With rising prices, the increased investment figure alone does not reflect the true increase in delivery. The progress made on important projects provides additional insights into this. For more information please refer to our Grid Map on page 39. Examples of this include the progress made in the IJmuiden Ver and Zuid West (Oost) 380 kV projects and the completion of Westküstenleitung and Ganderkesee - St. Hülfe projects.

The acceleration of our output is key in ensuring we are able to deliver grid capacity in time for our customers. TenneT is seeking support for our work in the areas we serve, as the urgency of delivering the needed grid capacity to realise a future-proof grid to support the energy transition in time for Europe's climate goals has the attention of regulators and policymakers. The use of 12 provincial and two city-based Energy Boards – for Amsterdam and Rotterdam – has brought municipal, provincial and national stakeholders together to find collaborative solutions for faster development of essential energy infrastructure. We expect that the co-operation with these Energy Boards should reduce the throughput times of complex licencing procedures.

Onshore

The expansion of the onshore grid is a key focus in sustainable industry policy, supporting the electrification of industry and facilitating the future expansion of offshore wind energy. In simple terms, without a much higher capacity onshore grid, the huge growth in offshore wind energy in the North Sea cannot be distributed to end-users.

In Germany, two of the most critical onshore projects are the long-distance high-voltage direct current (HVDC) onshore connections, SuedLink and SuedOstLink. These DC projects play a vital role in the energy transition in Germany, carrying wind energy from the North Sea to users in the south. In February, we officially started construction for the SuedLink converter in Brunsbüttel. It will convert wind energy from AC into DC so that it can be carried in bulk capacities of up to 2 GW over 700 kilometres with low transmission losses. Other converter stations for the project are also now in construction. In April, an important milestone was reached with the first planning approval decision for the Bavarian section of SuedOstLink. This HVDC connection enables the transmission of renewable energies from the north and east to the south of Germany and thus makes an important contribution to security of supply and CO_2 reduction in Bavaria.

SuedLink and SuedOstLink are part of a bigger DC grid vision in Germany, that TenneT is driving ahead with two other German TSOs. Together, we are laying the foundation for a smart, meshed DC grid in Germany that is optimally designed to transmit fluctuating renewable energy sources. This plan for 'Electricity Grid DC" also includes four more DC connections – SuedWestLink, NordOstLink, NordWestLink and OstWestLink. These projects are all being developed under the Electricity Grid DC umbrella, together forming the building blocks for the energy transition grid.

Building an onshore network of DC multi-terminal hubs will be critical to the realisation of an integrated offshore and onshore grid and to link future extra-high-voltage DC connections. They will help to bring high capacities of wind energy to shore efficiently, and to distribute the electricity throughout the country in the most efficient way. As part of our alliance

in Germany with 50Hertz, Amprion and TransnetBW, we have an innovation partnership with industrial partners Siemens Energy, GE Vernova and Hitachi Energy. The partnership aims to develop multiterminal hubs with DC circuit breakers for the first time. The technical concept is unique in Europe and represents an important step on the way to realising a grid that facilitates the climate-neutral energy system.

In the Netherlands, we are increasing the capacity of parts of the national 380 kV 'ring' - the backbone of the Dutch high-voltage grid. The capacity of the existing connections in the ring is being expanded by replacing the existing conductors with new conductors. Larger capacity has already been unlocked on the Lelystad-Ens and Diemen-Lelystad connections and the section between Ens and Zwolle. We are upgrading the capacity of the Dutch grid – and opening the possibility for more customer connections – with plans to build new substations around the country. Many substations will be modernised over the next 10 years.

In addition, we are increasing capacity in key areas of high demand and making additional efforts to alleviate congestion with an innovative 'sub-grids' solution, developed by TenneT. Sub-grids are like new slip roads built into the electric highways of the grid. By dividing the high-voltage grid into smaller sub-grids and expanding capacity, the traffic of electricity is better distributed, thereby alleviating congestion. Currently we have fourteen of these sub-grids in the Netherlands. But that is not enough. As part of our strong efforts to 'build, build, build' we aim to have 48 of these sub-grids by 2035. These will provide more slip roads and substantially increase the total capacity of the Dutch AC grid.

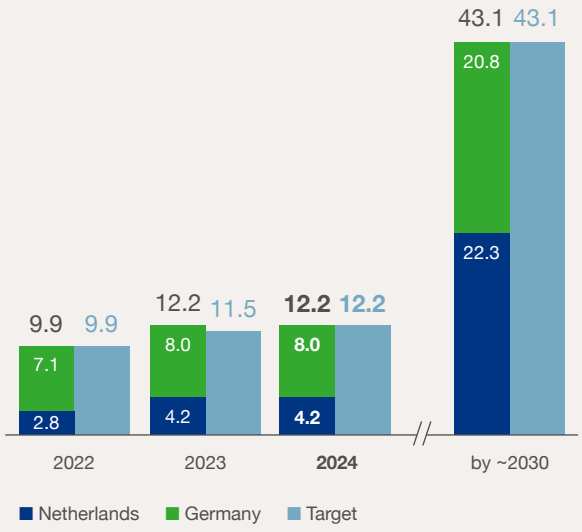
Furthermore, we also took an important step to reduce the environmental impact of our infrastructure construction, as we used green hydrogen for drilling in the construction of a new high-voltage connection between the Woensdrecht substation and Bergen op Zoom. We are also using fully electrical power drilling rigs for our cable system installations. This also helps us address the risk of delays regarding permitting, related to emission or air pollutants such as nitrogen.

Offshore

TenneT is a leading offshore transmission system operator (TSO) in the European Union. With our current offshore grid connection systems, we safely transmit more than half of the EU's entire offshore wind capacity from sea to land. To meet the rising demand for green electricity in Europe, we are working hard and systematically to expand our offshore electricity grid according to the governmental plans, developing the North Sea as a green energy powerhouse for Europe.

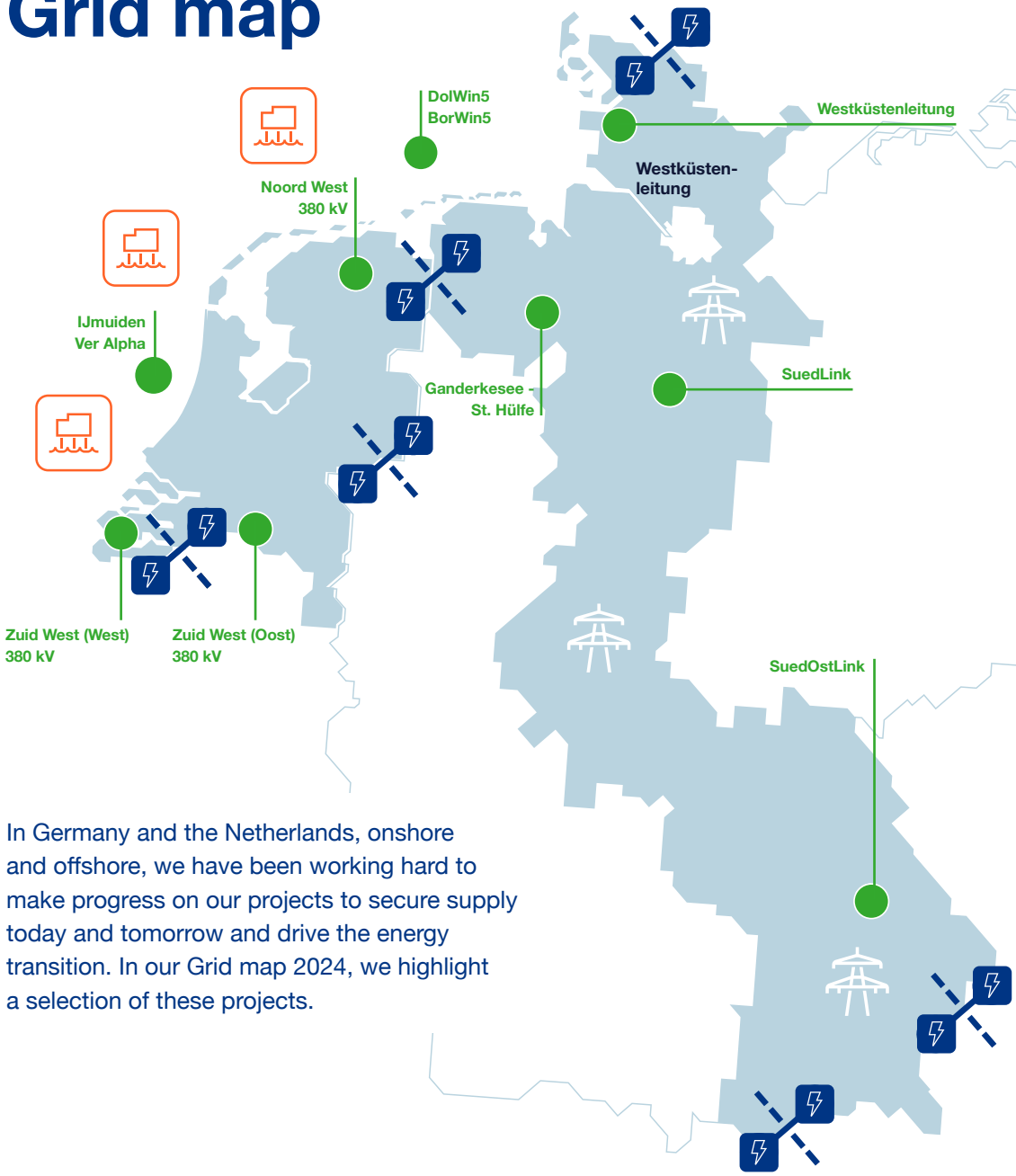
The North Sea has a potential for up to 300 GW of installed wind capacity – enough to cover the green electricity needs of its bordering countries and to make a significant contribution to Europe's 2050 climate targets. The Esbjerg Declaration - which still needs to be incorporated into national government policies – identifies new targets for offshore wind energy in the North Sea. It is the first intergovernmental agreement between Belgium, Denmark, Germany and the Netherlands and proposes the construction of up to 150 GW of offshore wind energy until 2050, whereof 65 GW until 2030.

Installed offshore capacity by TenneT
Gigawatt



* 1GW of older offshore wind farms in the Netherlands use a private connection to the onshore grid.

Grid map



In Germany and the Netherlands, onshore and offshore, we have been working hard to make progress on our projects to secure supply today and tomorrow and drive the energy transition. In our Grid map 2024, we highlight a selection of these projects.

As TenneT operates in both the Netherlands and Germany – with significant access to offshore wind energy – we are well positioned to play a prominent role in realising this vision for the European energy transition. Offshore grid development is therefore an important factor in our Target Grid.

To make this happen, TenneT will invest significant in offshore grid expansion by 2031, as we are an important partner in Europe's path to a green energy future. Our aim is to more than triple our current capacity, from 12.2 GW of offshore grid capacity today to 43.1 GW around 2030. In May, physical work on the 2GW Program began with the start of production of cables for two of the new 2GW offshore connections, BalWin4 and LanWin1. The new high-performance 525 kV cables make it possible to transmit 2 GW of direct current over long distances with low transmission losses.

Also in May, the jacket for the Hollandse Kust (west Beta) transformer platform was installed. The topside will be installed next year. The connection system will connect the OranjeWind wind farm that will be built in the coming years. Meanwhile, the 900 MW offshore platform DolWin epsilon has been successfully transported from its manufacturing site in Singapore and is in the process of being installed. The DolWin5 130 km-long grid connection breaks new ground for TenneT. For the first time, the so-called 66 kV direct connection is being used. Unlike previous projects, this means a wind farm transformer station is no longer required. Instead, the wind power produced off the coast of Lower Saxony is transmitted directly as three-phase (AC) current to TenneT's converter platform. The elimination of the wind farm's transformer station not only minimises costs, but also construction time and interference with the marine ecosystem. In summer 2024, TenneT announced that the completion of the DolWin5 grid connection is expected to be delayed with approximately 1 year until 15 December 2025. The platform related to the DolWin5 project is expected to be transported to the North Sea and installed there in the second quarter of 2025, after which the final connection work and tests for commissioning can take place, so that the first feed-in will be possible from autumn 2025 at the earliest.

Key to our Target Grid planning is the realisation of an integrated grid in the North Sea. In 2023, TenneT and National Grid Ventures from the UK took an important first step towards an integrated North Sea grid with the announcement of a project to develop a multi-purpose interconnector between the UK and the Netherlands. Called LionLink, the project is referred to as a hybrid interconnector because it will be the first interconnector that not only connects the high-voltage grids of two countries, but also an offshore wind farm in the Dutch part of the North Sea. With a capacity of 2 GW, LionLink will support decarbonisation and energy independence, and strengthen British, Dutch and European security of supply. In November 2024, the British regulator Ofgem approved the Initial Project Assessment for this interconnector. Minister Sophie Hermans of the Dutch Ministry of Climate and Green Growth has included LionLink in the latest Offshore Wind Energy Development Framework. This means we are allowed to commence investments for our LionLink project.

In line with the Climate and Green Growth Minister's letters to Parliament on this issue, TenneT has been committed to achieving deep landings of offshore wind energy through the Delta Rhine Corridor project in 2024. However, in December, the Minister of Climate and Green Growth decided that the required direct current cables should no longer be part of the Delta Rhine Corridor project. TenneT regrets this decision because this seriously delays the realisation of deep landings of offshore wind energy and creating an alternative route will have a major spatial impact. The costs incurred by TenneT have been charged to the result.

Build more customer connections

Investments in the onshore grid, especially in the Netherlands, are crucial for alleviating grid congestion and delivering more customer connections. For this reason, our focus in 2024 was on utilising our grid better to get more capacity from our existing assets. Working on our existing assets in this way can be more complex, especially in finding outage windows. As lengthy licensing and permitting procedures are not required for existing assets, grid-enhancing projects that unlock new capacity can be realised faster, for the benefit of customers.

This is particularly important in the Netherlands, where reducing the waiting list for new connections is urgent. Through the applications of grid enhancing technologies and the use of flexible (time-bound) contracts, we aim to free up capacity for more customers to be connected. Furthermore, we are significantly accelerating our building programme for additional customer bays, thereby creating more available 'sockets' for connection to the grid.

The cost of grid congestion and long waiting times for customers have a significant economic and social impact, frustrating ambitions of customers in their electrification efforts, business growth or investments in the economy. This effect is predominantly applicable for our Dutch operations. Another consequence of grid congestion is greater need – and cost – for ancillary services.

What could prevent us from reaching our goals?

As we accelerate in our critical work to build the electricity grid of tomorrow, there are negative impacts that we must manage. The affordability of the energy transition is a growing concern. The necessary investments have a direct impact on rising energy costs for consumers and businesses through grid tariffs. Large industries argue higher (total) energy costs are affecting their competitiveness, in Europe and beyond. Higher energy bills increase the cost of living for domestic end-users. To reduce these costs, we must build the future grid responsibly and in line with society's needs. This is also an important part of our Target Grid vision, to ensure we build in line with expected demand.

As our assets are built in the natural and cultural landscape, on land, underground, and at sea, we also have a significant impact on nature and local communities. To minimise the impact of our work and to build support, we engage in stakeholder dialogues that address potential societal concerns. We also mitigate the impact on nature, using 'nature inclusive design' in our projects and setting clear performance goals for nature, circularity, climate and human rights (see 'Transition to a brighter energy future within social and planetary boundaries').

In addition, we also face challenges with respect to the supply chain, particularly related to the growing scarcity of skilled personnel and contractors needed to execute our projects, due to intense demand in the market and the high number of projects needed to be completed in a relatively short time. Major project delays are therefore an ongoing risk that could also be influenced by scope changes, permitting procedures or environmental restrictions. Project delays could lead to claims, penalty payments, higher project costs and reputational damage for TenneT. This can become a limiting factor if we do not act properly.

In this regard, our model of long-term framework agreements with key suppliers and modular, standardised designs that allow faster roll-out of offshore and onshore assets are important for our success. This approach is core to our landmark 2GW Program.

Another challenge we must face is uncertainty. The time needed to complete our projects is long – often 10 years or more – requiring us to plan our work years ahead. In this respect, errors in grid planning, or policies and assumptions that change, can disrupt the long-term success of our plans. Our Target Grid 2045 vision is designed to minimise these risks, using back-casting to guide us on what we need to build, by when and where. Finding adequate space, strategically located to suit the needs of the future energy system (e.g. electrolysers located near the coast where offshore wind energy reaches land) is particularly essential, but also highly challenging.

We are also exposed to economic factors beyond our control, such as inflation, price fluctuations and resource scarcity. The intense demand for specialist suppliers in the energy market from us and other TSOs exposes us to risks of abuse of market position by a small number of in-demand suppliers, with the associated danger of budget overruns and disproportionate cost increases. Signing long-term framework contracts or diversifying supply contracts where needed help protect us against such risks, as well as using index based price adjustment clauses in contracts to reflect market developments.

Also in our supply chain, we face risks if any of our existing or potential partners experience business instability or financial difficulties from unforeseen market disruptions and could become unavailable for working with TenneT, thereby delaying our critical project work.

As TenneT relies on a predictable and stable legal and regulatory environment to plan our critical infrastructure investments and safeguard our financial health, changes to legislation and regulation can pose challenges to our critical infrastructure investments. To mitigate this, we ensure we are fully informed of anticipated developments on regulatory and legal issues affecting our work.

Increased overloading of the grid, while close to transport infrastructure, induces the risk of electro-magnetic compatibility – for example interference with electric railway infrastructure. This is increasing the challenge of spatial planning in the already space-constrained Dutch environment. Scarcity of land remains a key issue.

Sophie Hermans, Minister of Climate Policy and Green Growth, Deputy Prime Minister, Government of the Netherlands

"We should be proud of what we've achieved."

With responsibilities including the Netherlands' climate and energy policy and the greening of industry, Minister Sophie Hermans has a pivotal role in the Dutch energy transition.

"I believe the energy transition is about much more than climate goals alone," says the Minister. "It's also about building energy independence, ending dependence on fossil fuels, and most importantly, achieving a sustainable and competitive economy for the future."

The Minister sees TenneT as an indispensable partner in this journey. "When I started this position, (TenneT CEO) Manon van Beek was one of the first people I met to discuss the energy transition and tackling grid congestion. That's an indication of how important TenneT is for me and the government."

The Minister acknowledges that the energy transition "is not in the easiest period right now". After years of talking about far-away goals, she says the reality of action is hitting home: "People are seeing the real consequences, whether it's construction near their homes or the challenges that arise when plans are executed. For example, grid congestion prevents companies from investing in green and innovative solutions."

She says affordability is also high on the agenda: "The investments in the grid are crucial but have an impact on tariffs for companies and households. We're transforming to a totally different energy system but the costing mechanisms are based on an old model. TenneT is an important partner for our large-scale policy research to find possible solutions." To alleviate grid congestion, the government is working closely with TenneT. "It's a serious problem," says the Minister, "and we're doing everything we can with TenneT to strengthen the grid. However, this takes time, so we also need short-term solutions that bring flexibility into the system and use grid capacity in a smarter way, for example with new flexibility contracts. We can only solve these problems by working together and challenging ourselves to think outside the box."

Looking to the offshore grid, the Minister says TenneT's expertise in the North Sea will be critical for the Netherlands to achieve its goals for 21 GW of offshore wind capacity by 2032, 50 GW by 2040 and 70 GW by 2050. She says this growth in capacity, combined with new hybrid interconnectors, such as LionLink, will be crucial in strengthening energy security. "TenneT's role in this vision is essential," she says.

Ultimately, Minister Hermans stresses the optimism and pride of building a clean energy future: "In such a difficult process, it's normal to focus on what we could do better. The energy sector is dealing with a far more complex system, with uncertainty and challenges we didn't have 10 years ago. However, we should be proud of what we've achieved. If you look at how fast renewable electricity is growing, how industry is investing in green technologies, we've made incredible progress. The same goes for TenneT – what they've done and will do in the years ahead is extraordinary. As a government, we make plans for the energy transition, but without the creativity and motivation of partners like TenneT to make them happen, we won't achieve our goals."

"As a government, we make plans for the energy transition, but without the creativity and motivation of partners like TenneT to make them happen, we won't achieve our goals."

Mechthild Wörsdörfer, Deputy Director-General, Directorate-General for Energy, EU Commission

"Cross-border thinking is key."

The Directorate-General for Energy develops and supports the implementation of the European Commission's energy policies, which focus on delivering secure, sustainable and affordable energy to Europe. It engages in dialogue with European TSOs, including TenneT, on investing in grid infrastructure and boosting cross-border collaboration to make the clean energy transition happen.

As TenneT works to deliver a grid that can support Europe's climate goals for 2030 and 2050, the European Commission is a crucial partner. With a new Commission entering power in December 2024, Mechthild Wörsdörfer is now in place as Deputy Director General for the Directorate General for Energy.

"For us, the energy transition is all about competitive, affordable and secure energy prices," she says. "We need more renewables and more energy efficiency, which means we need more grids. We work a lot with TSOs like TenneT to discuss how we can make the clean energy transition happen, knowing that grids are a fundamental part of this."

Affordability is top of mind for the new Commission, particularly in relation to energy-intensive industry and EU citizens. Some of the Commission's first policies will include a Clean Industrial Deal and an Affordable Energy Action Plan. Mechthild suggests TSOs also have a role to play here. "I think there's a discussion about how TSOs can make the system cost as bearable as possible for consumers and industry. In the medium- and long-term, we need to roll out more grids, either within countries or across borders. TenneT is well-placed here given its presence in both the Netherlands and Germany. And in the short-term, it's about seeing where we can use existing grids more efficiently, with a particular focus on digitalisation, smart grids and the sharing of best practices between TSOs. Ultimately, by working together, we have a stronger chance of bringing that system cost down."

Mechthild believes that to achieve a true energy union, integrating energy markets and fostering European cooperation are both needed. She says the new Commission is encouraging this approach: "Cross-border thinking is key. The Commission is looking at updating our Trans-European Networks for Energy policy in the year ahead to have more European planning and coordination. We want to do this while respecting the grid plans of individual Member States, of course."

"A good example of regional cooperation is the North Seas Energy Cooperation (NSEC) that brings together Member States to support the development of the offshore grid. TSOs and the Commission also have a role here, as together we can work towards ensuring energy produced in the North Sea reaches beyond coastal countries. This is only possible when we have interconnected grids."

"We work a lot with TSOs like TenneT to discuss how we can make the clean energy transition happen, knowing that grids are a fundamental part of this."

TenneT's wealth of experience and expertise means it can lend its voice to the formation of EU policy and the development of projects of common interest (PCIs). "TenneT is very active when it comes to our dialogue with TSOs," says Mechthild. "To have more integrated European energy markets, we need a lot of input from TSOs, including TenneT, which is already really well-placed and serves a model for interconnectivity. I hope all TSOs continue to engage on an EU level."

Utilise the grid to empower society

To fulfil our core task to ensure the continuous supply of electricity to our end-users across the Netherlands and large parts of Germany, we rely on the important work of our colleagues working in the field, our offices and control centres. As demand on our grid and the complexity of the electricity system grows, our priority is to utilise the grid better, making maximum use of available capacity and unlocking solutions that prepare our grid for a climate-neutral energy system.

Grid availability (onshore)	Target	Grid availability (offshore)	Target
99.99988%	99.99962%	**97.09%**	95.07%
NL: 99.99988% | DE: 100.00000%		NL 97.58% | DE 96.77%	
2023: 99.99993% 2022: 99.99963%		2023: 97.90% 2022: 94.08%	

Introduction

As a transmission system operator (TSO), our core task is to ensure that society has a secure supply of electricity, today and in the future. One of the key impacts we have on society is to facilitate the needs of society, ensuring we deliver electricity and sufficient grid capacity to over 43 million end-users today, and develop a sustainable, reliable and affordable energy system that can meet the demands and ambition of tomorrow. We achieve this together with important partners in the electricity supply chain, such as electricity producers and distribution system operators.

Timely scaling up of our investments in grid infrastructure and a future-proof way of operating our system are essential to fulfil our core task. We must keep the grid balanced, secure and reliable, while accommodating the increasing ramp-up of electrification and the infeed of carbon-neutral energy sources. To cope with all challenges, we must find new solutions to utilise the grid better, stretching the grid's capacity, optimising how we handle planned outages and future-proofing system operations and market design. By getting more capacity from our existing assets, we can serve more of society's growing need for electricity, which helps to mitigate the financial and environmental impact that comes with new infrastructure. Grid enhancement and reinforcement serves society by helping to alleviate grid congestion, as unlocking additional capacity helps to connect more customers to the grid.

We are proud of our track record of providing a stable and secure supply of electricity. To be able to maintain this, we design, build, maintain and operate our high-voltage grid, transmitting electricity from where it is produced to where it is consumed. By ensuring the reliable supply of electricity to end-users, we have a significant impact, supporting economic and social development and the provision of essential services that society relies upon. Looking ahead, our impact is evident as we build a decarbonised grid to support the energy transition and Europe's 2050 ambition to become the world's first climate-neutral continent.

Long-term, we are committed to providing security of supply by developing a future-proof grid that fully facilitates a climate-neutral energy system and supports an integrated European electricity market. This means more than building infrastructure – it also requires us to fundamentally reconsider how electricity markets operate with an enhanced and future-proof market design, what is required to operate the electricity system and how we operate it.

This requires us to work with many stakeholders, including national, regional and local governments, other TSOs and DSOs and gas network operators.

How we managed this topic in 2024

The results of all our efforts to operate the grid are measured in our ability to secure supply and delivering a high grid availability. With the help of our colleagues, specifically those in our control centres and in the fields, we were able to maintain our high levels of security of supply this year. Despite having a strong performance in 2024, there were unfortunately also some instances of interrupted supply during the year. Examples of this are outages at the Dordrecht Merwedehaven substation in June and at the Meeden substation in August. In September a short power outage at the Port of Rotterdam caused an interruption to services, including the BP oil refinery, as well as smaller operations and the rail network in the area. Nevertheless, we are pleased with an onshore grid availability of 99.99988% and an offshore grid availability of 97.09%, both meeting our targets and in line with prior year's performance, though a little under last year's performance. Last year, we recorded an onshore grid availability of 99.99993% and offshore 97.90%. The offshore grid availability was impacted by the downtime of our interconnectors NordLink and COBRAcable and the offshore grid connection systems SylWin1 and Hollandse Kust (zuid Alpha). The interruptions related to our interconnection did not impact the onshore security of supply in the areas connected to these interconnections, but did prevent the cross-border import and export of electricity between the Netherlands and the respective Scandinavian countries in certain moments.

Unlock available grid capacity

Our teams work around the clock to ensure our grid provides a 24/7 supply of electricity in our service areas. The focus of this work takes place at our control centres where we operate the grid and coordinate the system across borders. Although we are proud of our achievement in providing a high security of supply to our existing end-users, it is becoming increasingly challenging to sustain this high level of availability. Our electricity grid is undergoing a transition to a system to which more climate-neutral energy sources are connected. This electricity is generated often in more remote areas, thus requiring new assets and capacity to ensure we are able to transmit it to where it is consumed, making it a more complex system to build, maintain and operate.

Society's growing demand for grid capacity, and rapidly rising use of electricity – such as in transport and industry – is placing further pressure on our grid capacity. Delivering connections and grid capacity for our customers is therefore at the core of our sharpened strategy. This strategy is designed to help us increase our output and deliver much-needed grid capacity for our customers, while balancing the need for energy system affordability, security and stability.

> "Delivering connections and grid capacity for our customers is at the core of our sharpened strategy."

In 2024, we specifically addressed our strategic focus on delivering for customers with the creation of a dedicated Customer Connections and Capacity (CCC) unit, with a clear focus and mandate to faster connect more customers. This unit aimed to deliver 36 customer connections in 2024. We were able to realise 40 customer connections and received 728 connection requests, which is above target. Colleagues from the CCC-unit are determined to speed up the completion of more customer connections through a cross-unit approach to speed up grid expansion and to maximise the utilisation of our grid by unlocking more flexibility by shortening the contract process and through a range of grid enhancing technologies. Through this, we are successfully extracting more capacity from our existing grid. For example, we were able to unlock a total of 700 MW additional capacity in the Utrecht area following a combination of actions, including grid-conscious charging of electric vehicles, grid-efficient installations in existing buildings and deployment of controllable power generation. Unlocking flexibility within the system has a great potential to better utilise the grid.

Some of these possibilities to better utilise the grid include:

- Stability and voltage control: the growth in wind and solar energy sources and the closure of coal and nuclear power plants have drastically changed the electricity system. With a large capacity of wind and solar generated energy successfully integrated, the level of renewables fed into the grid often meets or even exceeds electricity demand. The resulting volatility inherent to the energy resource causes variability of electricity flows and creates

significant operating challenges for balancing, voltage control and stability. Although we are proud of and fully committed to our high reliability level, maintaining this level of grid availability becomes challenging as the infeed of renewable energy sources into the grid increases. Unlike the traditional energy system, where conventional synchronous generators would not only produce electricity on demand, but also provide necessary stability, a renewables-based energy system requires us to balance numerous sources of renewable energy that have a more volatile and intermittent nature. This makes system stability and voltage control far more complex to manage. We are therefore investing in new technologies to increase both stability and the transmission capacity of the existing grid, including equipment that can help us reduce congestion. For example, phase-shifting transformers provide active power flow control, making it possible to redirect the flow within the grid. Another technology we use in this context are STATic synchronous COMpensators (STATCOM): a fast-acting voltage control device.

- Flexible customer agreements: meeting society's need for security of supply in the context of a more volatile and interdependent energy system requires innovative new solutions. This includes contractual solutions, for example with flexible customer agreements, where customers have a financial incentive to decrease or shift their electricity use, thereby decreasing grid load. This use of flexible contracts, where customers are encouraged to contribute to an adequate grid load, as well as congestion management by changing customer behaviour and adjusting their electricity demand, implies a sense of shared ownership and societal responsibility in operating the grid. Customers and multiple stakeholders increasingly become part of the solution, with the grid as a shared asset for society that provides long-term value for all. This vision shows how we can achieve more by co-operating with partners, unlocking integrated sector solutions. In the Netherlands, this model is now taking shape, as the Authority for Consumer and Markets (ACM) gave the green light for time-based and time-block contracts in July 2024. Time-based contracts enable connection of large customers to the electricity grid, where the connection is available for a minimum of 85% of the time. In return for making flexible use of the grid, customers pay a reduced transmission tariff. These new contract types are particularly interesting for companies without 24/7 business processes and are offered as an alternative to the existing fixed transmission right. In August 2024, TenneT signed its first time-based contract with the mega-battery operator, GIGA Storage. The flexible contract allows GIGA Storage to connect its battery project, GIGA Leopard in Delfzijl with a capacity of 300 MW and storage capacity of up to 1,200 MWh, to the electricity grid. The battery consumes electricity from the grid outside of peak hours, when prices are low, and then feeds it back into the grid when demand is higher. As a result, scarce grid capacity is used more efficiently.
- Opportunities for dynamic line rating: the increasing congestion in the grid due to insufficient capacity – particularly in the Netherlands – has a significant financial impact in the form of redispatch costs. Redispatch is needed when a grid operator has to use market-based resources at a specific location to keep the grid congestion free, with balanced supply and demand. We as a TSO can control the electricity fed into the grid from redispatch resources – increasing or decreasing the electricity flow to solve the congestions. Not only does this sometimes mean renewable electricity generation needs to be 'switched off' to avoid overloading the grid – which leaves valuable renewable electricity unused - it also means TenneT has to pay for the intervention of market-based redispatch. As grid congestion grows due to limited grid capacity and the rising in-feed of renewables, the need for redispatch remains as well as the associated cost. Therefore TenneT is utilising its existing grid better by applying Dynamic Line Rating (DLR) to both 380 kV and 110-150 kV connections. DLR is a smart technology that provides up to 30 percent more transmission capacity on an existing connection. When electricity is transmitted, the conductors in the high-voltage lines heat up. This heating causes the conductors to sag, which limits the maximum transmission capacity of a high-voltage line. However, at low temperatures, especially when there is wind, the line is cooled more, resulting in less sag. In such cases, more electricity can be safely transmitted, increasing the capacity of the high-voltage line. This, of course, is applied while guaranteeing that the system remains stable at all times. In recent years, we have gained more experience with DLR. Initially, it was applied to a few 380 kV transmission overhead lines in the Netherlands. In 2024, it was extended to some 110 kV transmission overhead lines and we will continue piloting DLR on these types of high-voltage lines.

Future-proof the grid

TenneT is building the grid for the generations to come. In this way we fulfil our promise of a brighter energy future. Target Grid is our vision and roadmap that shows what we must deliver. It is our plan for onshore and offshore grid infrastructure needed to support a carbon-neutral energy system by 2045. Enabling the transition to the Target Grid requires a fundamental rethink of how electricity markets operate, with an enhanced and future-proof market design and also of the way we operate the electricity system with different energy mixes and technologies.

In the future, our Target Grid will be part of a carbon neutral European energy system, where market design and system operations facilitate an efficient and reliable interconnected system for renewable generation, electricity consumption and storage. The work towards that goal has already started, as we work to implement system operations and a market design that is fit for the future.

Setting up system operations for a carbon-free electricity system

With a growing weather dependency, the power system is far more complex to control than it was a few years ago. The variability of the energy resources and consequently of the operational conditions, creates significant operational challenges that will increase as traditional fossil-fuelled power generation is eventually phased out of the system.

As such, operating the future grid will require us to balance numerous sources of renewable energy, additional assets such as electrolysers, mechanisms to influence consumer's demand for electricity and integration of new technologies to transmit green electricity over longer distances. At the same time, we will also be expected to deliver a reliable 24/7 supply of electricity, maintaining the standards of reliability our customers expect today. Achieving all this requires a fundamental approach to develop the new power system.

To keep this more dynamic power system in balance, TenneT may not be able to make the same use of traditional fossil-fuelled synchronous generators, as it has done in the past. Instead, electronics-based technology will play a bigger role in system operations and ancillary services, helping to enhance system controllability and stability. Being largely weather-dependent with constant fluctuations in electricity supply from renewable sources also means a future grid must operate as close to real-time as possible. This requires major changes in our system operations and market processes to ensure reliable and clear, instant communication with market parties.

An important development to make our system operations resilient for the years to come is the Control Room Of the Future (CROF) programme. CROF has the ambition to develop methodologies, processes and tools to guarantee excellence at system operations, including improved forecasts, dynamic security assessment, inertia monitoring and topology optimisation. This essential project also helps us improve grid utilisation and automation, by making our grid control centres future-proof and equipped to manage our increasingly complex and data-driven grid.

An example of a project from the CROF programme, in collaboration with the Dutch Research Council (NWO) and the Ministry of Economic Affairs, is the creation of a 'digital twin' of our grid infrastructure, allowing us to replicate the real-world system and its behaviour, including stability analysis of the grid with a high penetration of renewable energy sources. For more information please refer to 'Deliver more grid capacity together for our customers and to serve society'.

Market design for the future energy system

Our market design needs to meet the new circumstances of the future energy system. Therefore only building the grid faster and utilising the grid better will not do the trick if we do not find new concepts in the design of the energy market. A future-proof market design is essential to better align the dispatch of electricity with investment decisions of market participants, given the current challenges regarding congestion management and the need to expand the grid. This can also support us in building against for costs.

Our vision for market design is to have so-called locational signals improved, so these can support in congestion management and grid expansion needs. We have brought forward these concepts in discussion platforms organised by the German ministry of Economic Affairs and Climate Action. As a result, we developed and implemented a revised concept on how we can create flexibility when there is a surplus of renewable energy generation from wind or solar energy. In addition, we actively contribute to the current design

and discussion of capacity mechanisms to help keep the electricity system stable and secured. An example of this is the aforementioned new time-based contract TenneT agreed with GIGA Storage to make efficient use of the scarce grid connection capacity.

Provision of planned outages

The rapidly growing demand on our grid makes it increasingly difficult to plan and execute maintenance and capacity expansion projects. Providing sufficient outage windows that allow planned maintenance work or to connect new installations, are key to the planning of maintenance and asset replacement or reinforcement across our network. A system that is increasingly stretched to the limits of its capacity requires us to activate operational measures, such as redispatch to prevent congestion, keep a stable system and guarantee supply.

What could prevent us from reaching our goals?

A key risk regarding security of supply is asset, system or software failure, causing power losses or interruptions to supply. This could be caused by IT system or control system interruptions, cyber attacks, physical attacks on our assets, lack of voltage control, manual error or end-of-life applications. Other causes could be delayed or unperformed maintenance of our assets, increase of renewable energy systems or an unbalanced prioritisation between new projects and maintenance. We mitigate this through the optimisation of outage planning – creating windows where we can perform maintenance work – alongside an increasing focus on risk-based maintenance, resilience strategy and improved training.

In some areas of our grid, particularly in the Netherlands, congestion continues to be a challenge for our ability to ensure security of supply. This challenge mainly relates to new large customers wishing to be connected to our grid, whereas existing end-users should continue to enjoy the high reliability of supply TenneT is known for.

The result of not connecting customers in a timely manner is reduced trust and negative perception of TenneT as a reliable partner. It could have a significant impact on our climate target if for instance large industries and businesses cannot connect and complete the electrification of their operations. We are mitigating the risk of congestion not only by building new infrastructure, but also by utilising our current grid more efficiently. One of the mitigating actions we perform is to connect customers based on prioritisation, instead of a first-come-first-serve-basis, as this results in a more efficient way of working and helps reduce the lead time with several months. We are also working on reducing congestion by applying new grid-enhancing technologies, such as Dynamic Line Rating.

As more and more volatile and weather-related energy sources are connected to our grid, the grid operates closer to the limits of its capacity, with the risk of system overload. Keeping the system balanced and within voltage limits in such an unpredictable and dynamic energy environment requires extensive preparation and remedial actions on a daily basis, as well as the need to purchase ancillary services.

However, the availability of ancillary services can also be a risk that affects our plans. Our ability to keep the grid in balance by activating ancillary services could be affected by limited availability of interconnected power in Europe, or significant increases in traded electricity prices. Working with other TSOs and market parties to increase the availability of ancillary services is an important mitigating action. However, the high amounts of ancillary services that are increasingly required to balance our grid also carries financial and climate-related risks, as the purchase of these services is costly and on-demand energy requires the use of conventional fossil-fuelled electricity generation.

As we are responsible for infrastructure that is critical for national security and resilience, we are also highly alert to the risk of cyber threats. Cyber attacks can result in the unavailability of critical IT systems, data loss or hardware failure causing power outages. We are also highly alert to the threat of physical attacks on or sabotage of our assets. Additionally, there are multiple new security and Business Continuity Management (BCM) regulations in development and being implemented by the European Commission and national legislators. This also results in compliance risks.

We mitigate these risks through the implementation and certification of our Integrated Security Management System (ISMS) in accordance with international standards. In parallel we are investing in our cyber resilience through an extensive cyber security programme which includes topics as improved IT/OT security monitoring, increased security awareness initiatives, more robust incident management and BCM. To manage our physical security risks, similar programs are being executed for the protection of onshore and offshore infrastructure.

Dr. Christian Hartel, President & CEO, Wacker Chemie AG

"We need to act together with partners."

WACKER, the global chemical and biotech group, employs 16,400 people at 27 production sites around the world. In Germany, WACKER sites consume approximately 0.8% of the country's electricity, with its largest plant in Burghausen, Bavaria. As the group's electricity demands grow, its access to the grid, and its relationship with TenneT, are crucial to its future.

One of the biggest challenges in the energy transition is in industry, as production processes shift from fossil fuel-based energy to electricity. As a result, large industrial users of energy will dramatically increase their electricity consumption, placing more demands on the grid. WACKER, one of the biggest chemical companies in Germany, is a leading player in this transition, as it aims to cut greenhouse gas emissions by 50% by 2030 and become carbon-neutral by 2045.
Dr. Christian Hartel, President and CEO of WACKER, says: "The nature of our production processes means we are a very energy-intensive company. We are already a front-runner in our share of electrification – currently around 70% – so it's essential for us to have a secure, reliable and affordable access to green electricity. That's where our collaboration with TenneT plays a crucial role – not only for our business but also to achieve our climate goals."

Christian says WACKER and TenneT are in close contact, at an organisational and leadership level. "We interact almost daily – both parties know how important it is to work together. As the biggest company in the Bavarian chemical triangle – the third largest concentration of chemical industry in Germany – we're in a position to advocate for the energy transition for our industry cluster."

A key example of this is WACKER's success, alongside other local companies, in winning approval for a new 380 kV booster line to strengthen electricity supply to the Bavarian chemical triangle. With around 25 companies operating there, the triangle consumes as much electricity as Munich. As these companies increase their use of green electricity, the new connection – due to come into operation in 2035 – will significantly boost the region's energy transition.
Christian says he thinks TenneT is making good progress in grid development, helped by its strong alignment with industry: "We're acting in a well-synchronised way," he says. The delays, in his view, are mainly on the regulatory side: "That's where we see the most hurdles and most need acceleration."

As for areas where the relationship with TenneT could be better, Christian says some topics could be better coordinated. For example, he says the topic of industrial customers making more flexible use of the grid is an area where WACKER and TenneT need "better alignment".
He explains: "With our processes we need to operate at 100%, 24/7 all year round, so when people ask us to be more flexible in our electricity use, the answer is: this is possible, only to a limited extent. There could be a little more understanding on both sides of that topic."

"Single players can't do it all alone. The cost and the scale of the energy transition are just too great. Political support is essential here."

Looking at the scale of the challenge ahead, Christian says, "Clearly, we need to act together with partners. The cost and the scale of the energy transition are just too great. Political support is essential here – to achieve the energy transition on time for society, we need the constructive participation of governments."

Ruud Nijs, Founder GIGA Storage

"The sooner we come to solutions together, the better."

GIGA Storage is a Dutch energy company specialised in Battery Energy Storage Systems (BESS). Utility-scale batteries can be connected to the electricity grid, wind farms and solar fields to temporarily store electricity. TenneT sees BESS technology as an important component in the future grid, as it helps to integrate renewable energy sources, maintain grid balance and alleviate grid congestion.

GIGA Storage is an example of the new energy players that TenneT is partnering with to unlock innovative solutions in the energy transition. Because renewable energy sources are weather-dependent and unpredictable, battery storage allows sustainable electricity generated by wind or solar to be temporarily stored, providing green flexible power to maintain grid balance, connect more customers, and ensure security of supply.

Ruud Nijs, Founder of GIGA Storage, says: "We're a new industry and are tiny compared to a TSO like TenneT. But we're all in the energy transition together. Whether it's talking to TenneT, to DSOs, the government or the regulator, it's important to stay positive and find solutions."

GIGA Storage already has two large BESS installations in the Netherlands and several more in development, including GIGA Leopard, with a capacity of 300 MW and storage capacity of up to 1,200 MWh. Located at a former aluminium plant in Delfzijl, the site will offer battery storage on an industrial scale from 2027.

The strength of TenneT's partnership with GIGA Storage was highlighted last August, when the two signed the Netherlands' first time-limited grid contract for GIGA Leopard. This new agreement gives GIGA Storage the right to take electricity from the grid, or feed it back in, for 85% of the time, as a minimum. Flexible solutions like this free up scarce grid space during peak hours, alleviating congestion and feeding green electricity back into the grid when there is less sun and wind. Ruud says it's essential more large-scale projects like this are realised, as they strengthen energy security and boost economic growth. "The grid is like a highway congested with traffic jams. By working with TenneT to integrate battery storage, we can smooth those traffic jams out and get more companies and citizens connected. The sooner we come to solutions together, the better," he says.

As in most relationships, there can be challenges. Ruud says grid tariffs are an ongoing concern: "They represent 70-80% of our operational costs, but as a battery business we don't feel this is fair. Ultimately, we are not causing congestion, we are helping to solve it. I feel we need a more balanced reflection of our contribution in future tariffs. In other European countries BESS projects are exempted from grid costs."

"From entrepreneurs like me, to TenneT and the government, we are all talking – the lines are open."

Ruud says positive collaboration between stakeholders is essential to make the energy transition happen. "From entrepreneurs like me, to TenneT and the government, we are all talking – the lines are open. We're dealing with smart, committed people who all want to contribute. In the bigger picture, this is about so much more than business. We are working together on critical infrastructure for the future of our society and the security and prosperity of Europe."

Deliver more grid capacity together for our customers and to serve society

The nature of our work as a TSO and our commitment to the energy transition requires us to work closely with our stakeholders – the task ahead of us is too vast and complex to act alone. We forge and maintain strong strategic partnerships with a variety of external stakeholders, seeking co-operative ways to achieve our strategic goals.

Number of initiatives with other stakeholders that helped build the grid faster or utilised the grid better

30

2023: 27
2022: 11

Introduction

The ambition for Europe to be the world's first climate-neutral continent by 2050 has consequences for the whole of society. TenneT is one of many parties tasked with making this ambition a reality, alongside many others in the energy, engineering, finance, technology, academia and policy sectors. Our role is to design, build, maintain and operate an electricity grid that is climate-neutral and can meet the future needs of a decarbonised economy. This is a huge task, and urgent: we must build the grid faster and utilise it better to achieve our aim of delivering more grid capacity.

As we are committed to continuously improve, work smarter and develop radical new solutions, we know that collaboration with an ever-expanding network of partners is essential to build the grid faster, utilise it better, and ultimately to deliver together for our customers, and society. No single player can achieve the goals of the energy transition alone.

We work with a wide range of partners: customers, supply chain parties, academia, like-minded European countries, technology providers, national and local governments, regulators, DSOs and other TSOs. While we rely on others and collective efforts, we are also aware of our societal responsibility. We aim to use our combined size and investment volume to shape our sector for the better. We acknowledge that our high investment volume presents us with a unique opportunity – our project pipeline provides a basis for investments in supply chain growth, green

jobs and manufacturing capacity of components essential for the energy transition. We work with our partners to deliver results at scale, prioritising international collaboration with peer networks of DSOs and other TSOs, so that we can unlock innovation and deliver transformation beyond national borders.

How we managed this topic in 2024

To accelerate our plans for Target Grid 2045, while also improving the performance of our existing grid, we must find the right strategic partners to co-operate with. This chapter looks at our performance in 2024 from the lens of our sharpened strategy: how we worked with stakeholders to forge new partnerships and strengthen existing ones, to support our aims to build the grid faster and utilise it better so we can deliver together for our customers.

Build the grid faster, with our partners

Building the grid faster means delivering more grid capacity for customers, while overcoming barriers that slow us down. The rapid growth of renewable energy generation and expected onward growth in electricity demand require accelerated expansion of the transmission grid. We must connect more customers, at an acceptable cost. We have an opportunity to lead the way in sector standardisation and find ways to work efficiently across our supply chain, which will help us to reduce costs and accelerate, together.

We rely on our partners in many ways to achieve our goals. Supply chain readiness is essential as we need our partners in place to expand our project execution capacity. We therefore need to address constraints in planning and permitting timelines, material shortages and scarcity in the labour market for skilled personnel. Our co-operation with key suppliers in the 2GW Program shows this in action, as the multi-year, large-scale contracts awarded for this work will help to attract more people into our sector with greater job security. The start of cable production for the 2GW Program in 2024, shows these long-term partnerships bearing fruit.

The first DC cables produced by the South Korean cable manufacturer LS Cable are intended for the BalWin4 and LanWin1 grid connection projects (see 'Build the grid faster' for more information). Besides, in 2024, we redefined our cable construction policy to foster greater innovation and sustainability with our framework partners in both cable and civil works. Together, we are moving from traditional open trenching to duct installation with advanced trenchless techniques, allowing cables to be pulled in later. Our framework partners' expertise is essential to achieving this transformation in electrification, working in unison to meet the demands of the energy transition. Moreover, regional grid owners will be benefitted from this initiative as well, which creates a unified, forward-driven approach to the energy transition across the sector.

The expansion of the electricity grid is highly needed to meet the rapidly increasing demand for new and heavier connections. By working together strategically with qualified partners we can reduce delivery time, starting with our agreements. For example, we signed a framework agreement in 2024 with partners Siemens Energy, Hitachi Energy and GE Vernova for the supply of 110 kV and 150 kV gas insulated switchgear (GIS) installations in the Amsterdam area and Rotterdam port. This new agreement provides us with an average reduction in lead time of six to eight months compared to the current method of tendering, accelerating the building process.

Building faster by interconnecting and innovating

As our Target Grid 2045 strategy envisions a meshed onshore and offshore DC grid, with high-voltage DC (HVDC) corridors and multi-terminal DC hubs, we need to overcome technological challenges and expand connections internationally, as many of the solutions needed to realise this vision do not exist yet.

> "The expansion of the electricity grid is highly needed to meet the rapidly increasing demand for new and heavier connections."

A good example of a partnership that is focused on the development of this new HVDC technology, principles of standardisation and hands-on collaboration across borders, is the InterOPERA programme. Co-funded by the European Commission's Horizon Europe programme, InterOPERA is a consortium of 21 European partners: a team of HVDC manufacturers, TSOs, sector associations and a technical university, working together to enable the transition of the European energy sector. This collaboration is designed to ensure that the HVDC technologies used in the future grid use standardised and inter-operable technologies that can be supplied by multiple vendors (as opposed to closed, proprietary systems). This will help TenneT to procure its first multi-vendor HVDC system ensuring interoperability by design – a key project that will have a tremendous impact on our ability to accelerate building and eventually to utilise the future DC grid better. The project completed its second year in 2024, with TenneT leading a working group focused on ensuring that HVDC components from different suppliers are interoperable in the future.

Reliability and resilience of our grid – both now and in the future – is crucial. We must safeguard a secure electricity supply as part of our societal commitments. We partner in a European consortium called HVDC-WISE, which focuses on

solutions to ensure reliability and resilience of the high-voltage grid. TenneT leads a work package on 'concept architecture for reliable and resilient AC/DC systems', and is developing a tool for studying reliability of supply and issue reporting, along with the other 13 European network partners collaborating in HVDC-WISE.

Furthermore, in 2024 TenneT together with one of its contract partners, announced an innovative solution for making construction projects more sustainable, especially in areas facing nitrogen reduction challenges. This pilot project used green hydrogen to power drilling during the installation of a new high-voltage cable connection between the Woensdrecht power substation and Bergen op Zoom.

Building faster by standardising

Standardisation is not only critical to build our grid faster for connecting more customers, but also the key to realise our sustainability ambitions. Our 'Decarbonising the supply chain' project aims to reduce upstream emissions in our supply chain, while our Joint Industry Project is developing common standards for measuring and evaluating sustainability in power transformers. The aim is to develop a standard sustainability measure, so that there is transparent comparability. This is the only way to create a fair benchmark in the industry, regarding the approach, measurement and comparison of sustainability of our assets.

Working with modular standards for high-voltage substations and high-voltage pylons is another way we accelerate our building process. Modular construction is based on standard design and requires an integral way of working throughout the chain - from TenneT to our market parties to subcontractors. Together we develop the modular design solutions in one place, where they are managed and deployed. Currently, the first 380 kV high-voltage substations (Musselkanaal and Halsteren) are being built according to the Modular Construction design. The added value for the contractor is noticeable because a large part of the design is available and construction can start immediately. Besides, the visualisations help to provide stakeholders more concrete impressions of the impact on the environment. This approach provides clarity and enables us to quickly implement improvements, enabling us to speed up and do more work in more places with the same number of people.

While we are focused on connecting more customers, we must also ensure that our existing infrastructure is equipped for the future. We work with partners to find innovative maintenance solutions to boost efficiency. The Bay Replacement Programme is an example of how we use a modular, standardised approach to replace high-voltage substations in busy urban areas in a faster, simplified way. A total of 140 substations must be replaced by 2031 - a massive maintenance project to get these 110 and 150 kV stations ready for the future. In 2024 we moved from the proof-of-concept phase into the implementation phase, making progress in this programme and replacing substations in the Dutch locations of Hengelo Weideweg and Nederweert. TenneT works closely with external design and manufacturing partners in this programme, who have developed a prefab solution to help us build our future-proof grid faster while making it easier to maintain the grid efficiently by boosting digitalisation capabilities.

Our overhead line maintenance pilot project with Siemens made good progress in 2024, entering the scale-up execution phase. This project aims to implement a multi-tiered approach for digital inspections of high-voltage lines using satellite, helicopter, and unmanned aerial vehicle (drone) imagery. By employing advanced AI analytics for comprehensive defect detection and process integration, we can ensure ongoing system health and safety while using the latest technology to build and maintain our grid faster.

Partnerships to secure talent and foster knowledge exchange

Due to the growing ambitions to accelerate the energy transition, TenneT's workload is rapidly increasing. In order to fulfil our targets, a significant growth of our internal and external workforce is taking place. However, we are doing so in a challenging labour market, which poses a risk to our build faster ambitions: new talent is scarce due to intense competition for personnel. As the energy transition is a global endeavour, we are one of many employers – not only other TSOs, but also DSOs and utility companies– who are scaling up investments in energy projects. In this regard, TenneT does not only need to ensure it can recruit and retain the people it needs, but that our value chain partners also have the personnel to deliver the work we need to achieve Target Grid 2045.

To remain a competitive employer and attract new talent, while retaining the valuable people we already have on board, we are committed to ensuring that TenneT is an energising and sustainable place to work (read more about this in our chapter 'Create a safe and inspiring workplace').

Looking outside TenneT, we also have partnerships in place to support this aim. We collaborate with academic institutions and have long-term framework agreements with suppliers and other players in the energy sector, which help to ensure we have the talent we need to deliver on our goals, not only within TenneT but also in our value chain.

For example, we partner with educational institutions in several ways: we outsource research to advance our industry insights, expertise and cutting-edge innovation and we also inspire the next generation by educating and engaging with new talent. We have a vested interest in supporting institutions to attract more young people into STEM-courses (Science, Engineering, Technology and Mathematics) and work to forge pathways for that talent to grow their skills and careers at TenneT.

We have academic partnerships with a wide range of academic and research centres, such as the University of Erlangen and Bayreuth, RWTH Aachen, TU Delft and TU Eindhoven. Furthermore, we have a multi-year partnership with HAN University of Applied Sciences in Arnhem. To foster more specific education and qualifications tailored to our sector, we have also helped to introduce the Power Minor. We collaborate with universities of applied sciences in The Hague, Amsterdam, Arnhem and Nijmegen for this minor programme, which teaches students about the generation, distribution and transmission of electricity. In 2024 we took the first steps in setting up a long-term knowledge-exchange partnership with The Royal Netherlands Meteorological Institute (KNMI) - the Dutch national weather service - and Top-sector Energie, a platform committed to driving energy innovation in the Netherlands. Our energy sources are increasingly dependent on sun and wind and have a direct impact on both the generation and purchase of electricity. The variability of weather is therefore a major influence on, for example, choices made in energy system planning. This collaboration with KNMI will see us work closely with both partners to develop a joint research agenda at the intersection of energy and climate. The aim is to jointly gain greater insight into the impact of weather effects on the energy security of the Netherlands.

Utilise the grid better, with our partners

Utilise the grid better means making optimal use of our existing and growing grid, with improved insights and grid-enhancing technologies, system operations tools and market design. In the short-term, this includes managing grid congestion. With improved forecasts and real-time insight in the electricity grid, we aim to ensure that the available grid infrastructure can be used optimally. This also requires unlocking flexibility from electricity generators, consumers and storage systems.

Using the grid optimally also means future-proofing the system operations toolbox for the future carbon-neutral electricity system. It also requires updating the market design to enable efficient use of the grid by our customers onshore and offshore, as well as the integrated European electricity market. We must build on the power of technical expertise towards non-linear solutions, driving innovation and efficiency across our operations and together with our partners and stakeholders.

Partners for sustainable energy systems

We work closely together with governments, our peer TSOs and DSOs, partners and stakeholders to continue to design and develop the optimum future energy system, taking into account the role of electrification and other decarbonisation options.

A challenge to our efforts to maximise our grid and minimise our impact on the environment is the use of SF_6 insulating gas in our switching installations. As a harmful greenhouse gas, we recognise the need to replace SF_6 gas with more sustainable alternatives that provide similar functional properties without harmful emissions. We are working closely with industry partners to explore and test SF_6 alternatives in our assets, for example with our long-term Hybrid gas insulated switchgear partnership (GIS). We have a five-year research project with Siemens and Hitachi, which are independently developing special disconnectors that are needed in addition to the standard GIS components for an SF_6-free hybrid GIS. This innovative collaboration is key to making our operations SF_6-free in the future and is an important step towards reducing our SF_6 emissions in the coming decades. In 2024 we moved into the initial stages of

investigating and researching the technical requirements for this (see 'Transition to a brighter energy future within social and planetary boundaries' chapter for more information on partnerships to mitigate SF_6 leakages).

Our commitment to innovation requires us to seek out new types of partnerships. One example of this is when TenneT signed its first time-based contract with the mega-battery operator, GIGA Storage, in August 2024. The flexible contract allows GIGA Storage to connect its battery project, GIGA Leopard in Delfzijl, with a capacity of 300 MW and storage capacity of up to 1,200 MWh, to the electricity grid. As a result, scarce grid capacity is used more efficiently and renewable energy is made more affordable. This partnership is a milestone and example of innovation, marking an important step forward in more efficient use of the existing electricity grid (more information in the 'Utilise the grid to empower society' chapter).

We work closely with other European transmission system operators in Equigy, a cross-border joint-venture that develops the crowd balancing platform. The goal of this platform is to enable millions of European consumers to do their part in the energy future to balance the grid, using small flexibility devices such as home batteries, electric vehicles and heat pumps. In 2021, we founded the joint venture Flexcess GmbH, together with TransnetBW, which will scale up crowd balancing services on a broader level so we can establish a common German TSO roadmap. We also focused on developing and testing distributed flexibility redispatch processes in Germany, working closely with our pilot partners. In the Netherlands, we worked on embedding crowd balancing platforms in TenneT's policy in 2024, opening the market to balancing service providers by offering voluntary and contracted bids for aFRR capacity via the platform. These partnerships help us to balance the grid in a more volatile and intermittent electricity system.

To tackle the challenge of a future grid that is more dependent on renewable sources and especially that of an increasing share of offshore wind energy generation, an important partnership is our FUTURESYSTEM project. Here, together with TU Delft, TenneT is investigating how to manage the risk of an unstable electricity system. The project findings will form the basis for new operational principles for both offshore and onshore multi-energy hubs.

Data-driven grid

As we look for ways to utilise the grid better, we must become more data-driven and boost our digital capabilities.

The Control Room Of the Future (CROF) is an overarching programme that aims to make our system operations resilient for years to come by boosting grid utilisation, data insights and automation. The CROF programme includes projects where TenneT is partnering up with external stakeholders to enable the acceleration of the energy transition and tackle societal challenges. For instance, a new project 'Real-time System Operation for Network Advancement and Transport Efficiency (RESONATE)' has been initiated this year. This project is funded by the Netherlands Enterprise agency. TenneT, Alliander, Enexis and Stedin are contributing to this research which is led by TU Eindhoven. The goal of this project is to establish preconditions for implementing real-time system operations and to develop an appropriate system architecture. Through real-time system operations, available transport capacity can be used more efficiently, enabling more grid connections to be realised and less curtailment of renewable energy is required at peak times.

In the end, we need flexibility to ensure we can balance supply and demand of electricity in a changing energy landscape. The concept of flexibility relates to how TSOs make use of energy sources to call for the required capacity when needed and reduce capacity when there is excess. This is necessary to always balance the grid. An important factor in balancing the grid is to have data available for society to enable people to make the right choices at the right time to actively participate in this. That is why we are working in partnerships with other stakeholders like TSOs and others like technology companies to provide these insights and data.

In March 2024 TenneT and Gasunie, the gas transmission system operator in Germany and the Netherlands, launched the Dutch National Energy Dashboard. This dashboard provides insights and data on energy generation, energy use and CO_2 emissions in the Netherlands and is free for everyone to use. The launch of the National Energy Dashboard is an important step towards a more sustainable energy future, as data plays a key role in using energy more efficiently. In Germany, a similar dashboard has been developed; the CO_2 Monitor.

We are convinced that a sustainable future energy supply can only succeed through cross-company data exchange. With this in mind, we set up the energy data-X consortium, a network of 14 interdisciplinary partners across the energy industry, information and communication technology, science and standardisation sectors, in late 2023. Energy data-X aims to achieve German and European climate targets by enabling a secure and sovereign data exchange amongst energy partners. As project coordinator, we are responsible for the overall consortium as well as designing the compliance system and evaluating energy-specific experience. After one year of intensive collaborative work, we achieved good results in 2024: a detailed description of the blueprint required for the data ecosystem, based on DSSC (Data Spaces Support Centre) building blocks, which are the official EU standards, and a data exchange prototype between four parties within the ecosystem. Energy data-X was granted Lighthouse Project status in spring 2024, recognising its importance as an energy project within the wider Gaia-X European initiative to develop a federated secure data infrastructure for Europe.

Enterprise Digital Twin projects

In 2024, we were closely involved in two projects focused on building and scaling our digital capabilities: TenneTwin and TwinEU. These innovative research projects will help us to also utilise our grid better.

Within the CROF programme, TenneTwin involves the creation of a "digital twin" of our power grid, allowing us to replicate the real-world system and its behaviour, including stability analysis of the grid with a high penetration of renewable energy sources. This project is co-funded by the Netherlands Enterprise agency and sees TenneT work closely with TU Delft. With this, we are making TenneT's grid control centres future-proof and equipped to manage the data-driven grid of tomorrow.

TwinEU is an EU-funded project focusing on data federation, which aims to look at how we can exchange data at the European level to unlock the potential of the European energy system. Together with 75 European consortium members, such as Alliander, Stedin and TU Delft, we are looking into creating a federated data exchange. The project officially kicked off in January 2024. This initiative is linked to the EU Action Plan Digitalising the Energy System and this pilot aims to create mutual benefits for TSOs and DSOs by providing computationally efficient and numerically trustworthy tools for anticipating and mitigating electricity instability. The project is expected to have a significant impact in improving the resilience and cyber security of interconnected power grids and ensuring rapid recovery from potential cyber-attacks by using digital twins for scenario analysis and training simulation.

Delivering for our customers, with our partners

Making strides in building the grid faster and utilising the grid better is how we plan to achieve our overarching goal of delivering more grid capacity for our customers. As outlined before, we work closely with stakeholders to ensure we can deliver the grid capacity needed by our customers and society. We seek out partners and collaborations that enable us to find innovative solutions so we can meet our customers' needs.

We work closely with partners to unlock solutions for creating more customer connections. In 2024, we set up a dedicated Customer Connections and Capacity (CCC) unit for this purpose. Also for this, we work with partners to achieve our goals, by tightening the collaboration with existing partners to speed up the building process and through scouting (technical) innovation partners to utilise the grid smarter.

Open Innovation Programme

Our Open Innovation Programme is an annual competition where TenneT invites external parties to submit solutions, concepts and ideas relating to the energy transition and future grid. We are firm believers that it takes all of society to solve the energy transition challenges and we welcome these contributions.

The 2023 edition focused on finding solutions to optimise grid usage and combat congestion, helping us to connect more customers to the transmission and distribution grids. As a result of this programme, a partnership with N-SIDE was formed that pitched a solution related to the challenge on how to make optimal use of the transport capacity and connection points to the electricity grid. In 2024 the N-SIDE collaboration moved into the proof-of-concept phase.

The 2024 edition invited participants to solve a challenge related to TenneT's SBTi targets (Science Based Targets initiative), specifically regarding the question 'How to significantly reduce greenhouse gas emissions of operations buildings of extra-high-voltage substations over the entire life cycle?'. International engineering and consultancy company Ingérop is the winner of TenneT's 2024 Open Innovation Programme who came up with a solution that emphasises efficient use of materials and simple modular and low-tech construction methods, combined with attention to efficient use of space and integration of renewable energy. In doing so, Ingérop meticulously follows the principles of sustainable design. Ingérop's idea also provides the right balance between innovation and readiness for implementation. This balance is crucial, as TenneT will soon apply the solution in the operations building of the planned "green substation" in Marienberg, Germany.

A solid financial foundation

To meet the challenges of affordability in the context of the rising cost of the energy transition, we actively engage with regulators, relationship banks, investors and our shareholder to ensure we can work in a sustainable regulatory framework and access the financing we need. TenneT's annual grid investments have doubled since 2020 and are expected to increase to around EUR 200 billion in the coming ten years. Additional investments in our grid must fit in a cost-effective and affordable total energy system.

> "We seek partners and collaborations that enable us to find innovative solutions so we can meet our customers' needs."

To finance the expansion of offshore grid connections, TenneT co-operates with co-investors such as KfW-IPEX, Copenhagen Infrastructure Partners (CIP) and Chubu Electric Power. These co-investors contribute equity via separate legal entities and therefore have financial participation rights. Their financing helps to ensure adequate financial ratios. Furthermore, their participation strengthens TenneT's interest in a reliable and stable regulatory framework as co-investors interests have been communicated to policymakers and regulators. To secure a solid financing and ensure that we can drive the energy transition in an affordable way, we maintain strong relationships with our Shareholder, the Dutch state, potential third party investors and with the banks that participate in TenneT's Revolving Credit Facility (RCF) – ABN AMRO, BNP Paribas, Commerzbank, Deutsche Bank, HSBC, ING, NatWest, Rabobank, Santander, UniCredit and SMBC. Through these partnerships, together with the shareholder loan facilities and issued hybrid green bonds, we are able to secure our financing (please also refer to the 'Safeguard sustainable financial performance' section).

What could prevent us from reaching our goals?

To be able to drive the energy transition and deliver Target Grid, societal acceptance is essential in keeping pace. Building new assets impacts local communities living near our assets. For instance, acceptance by local communities is higher for using underground cabling rather than overhead lines, due to less visible impact on the landscape and safety perception (i.e. regarding high-voltage lines and electromagnetic fields). If societal acceptance for overhead lines is not secured it could impact not only reliability of supply, as it is more difficult to maintain an underground cable than an overhead line, but also affordability as it is more costly to build and maintain underground cables.

Due to the currently growing electrification predominantly in the Netherlands, congestion of our grid becomes more important to manage. For certain areas, the number of requests to be connected to our grid is significantly higher than we can cater for within reasonable time, or our local grid capacity is more heavily used such that there is limited bandwidth left to connect new customers. Congestion management in the Netherlands has become a pressing issue, leading to significant adverse impacts on society. It could hamper the energy transition, preventing small to large businesses achieving their sustainability targets and the overflowing grid also holds back expansion plans for businesses and new homes. If our efforts to address these challenges are insufficient, it could, besides the societal impact, also effect TenneT's climate target and green ambition. This would cause negative media exposure and reputational damage. TenneT is currently investing in its customer connection activities to address this now and in the future, through our new Customer Connection and Capacity unit. One of the mitigation strategies is to step away from the 'first come first serve' principle and instead take into account overall system effectiveness and efficiency.

Societal acceptance of the climate ambition is not only affected by the political landscape, but also by the speed of delivery and the financial cost of it. A high ambition to deliver on a green society, with a focus on electrification, could lead to higher-than-average costs to realise these projects. Costs of materials and services are increasing due to unavailability and worldwide geopolitical tensions also contribute to high energy prices. These higher costs related to the green ambition and delivering under these circumstances are in the end paid by society and could lead to lower acceptance by lower income households and therefore affect our reputation.

Furthermore, a changing political environment can create uncertainty and slow our progress towards our ambition. Political change can also affect rules, regulations, or the regulatory environment in general. While this could be seen as a risk, it could also become an opportunity for us. Political change could be a catalyst when legislation and regulation are supportive of innovation, working together on cross-border partnerships and incentivising solutions for future challenges.

From all perspectives we need to focus on unlocking innovation through strong strategic partnerships with our external stakeholders to achieve our goals and ultimately deliver our Target Grid. Getting there will involve collaboration and negotiation to reach our shared destination of a clean energy future. We aim to ensure we are a partner of choice to help drive progress and solve these important societal challenges, together.

Jacob Tas, CEO, Royal Netherlands Sea Rescue Institution (KNRM)

"Our mantra is safe away, safe home."

The Royal Netherlands Sea Rescue Institution, or KNRM, is the voluntary organisation in the Netherlands tasked with saving lives at sea. Its rescue boats are on call 24/7 for emergencies in the North Sea, where TenneT is increasingly active in offshore grid development to accelerate the energy transition. Safety at sea is a priority for both parties.

KNRM's crew of 1,500 professional volunteers rescue 4,000 people from Dutch coastal waters annually and provide radio medical advice to seafarers anywhere in the world. As a charitable organisation offering services free of charge, without government subsidies, KNRM relies on donations to stay afloat.

The North Sea is a key development area for TenneT. As an offshore grid operator, it manages and builds infrastructure to connect wind farms far out at sea to the onshore grid. In often hostile and hazardous conditions, TenneT's employees and partners work on the construction and maintenance of offshore sockets and sub-sea cables that bring wind energy to land.

Jacob Tas, CEO of the KNRM, says that as Dutch offshore development intensifies in the North Sea, search and rescue operations are also increasing. "The ambition to expand offshore wind energy generation dramatically by 2050 will profoundly impact the region. The waters are already very busy and wind farms are located farther offshore, which adds complexity," he explains.

For many parties active in the North Sea, the Julietta D freighter incident on 31 January 2022, during Storm Corrie, is still top of mind. The ship drifted and collided with the foundations of the Hollandse Kust Zuid wind farm and a TenneT transformer platform. Thanks to the efforts of the KNRM and evacuation by a Coastguard search and rescue helicopter, the ship's 18-person crew was brought to safety.

Reflecting on the incident, Jacob sees it as a wakeup call for the industry to how dangerous the North Sea can be. Thankfully TenneT's platform was unmanned at the time, but there was still damage done.

In July 2024, TenneT and KNRM formalised their partnership, with TenneT committing to donate € 20,000 annually for five years. Safety is the foundation of the partnership, as Jacob explains: "Our mantra is safe away, safe home, which fits with TenneT's safety values. Financial donations from long-term partners like TenneT enable us to train our volunteers and provide them with the best materials, so they can do their job professionally and safely," says Jacob.

"Only by working hand in hand can we make North Sea development as efficient and safe as possible."

Human error accounts for 80% of incidents at sea, so education and prevention are at the core of KNRM's work. Jacob's team recently gave a presentation highlighting its lifesaving work during TenneT's 2024 Offshore Days workshop for Large Project Offshore (LPO), and there are more planned for the future.

Jacob says he is pleased with the collaboration to date and hopes that it will encourage other major infrastructure players operating in the North Sea to follow suit. "We trust that TenneT will serve as an inspiring example. We cannot achieve the energy transition alone – only by working hand in hand can we make North Sea development as efficient and safe as possible," Jacob says.

Tim Oliver Holt, Member of the Executive Board, Siemens Energy

"We strongly believe in our strategic partnership."

Siemens Energy is a global leader in energy technology, at the forefront of engineering solutions in the energy transition. As such, it is a vital supplier and technology partner across a wide range of TenneT's onshore and offshore projects.

Responsible for Grid Technologies at Siemens Energy, Tim Holt is at the forefront of the low and zero carbon energy systems needed to deliver the energy transition. With a portfolio including transformers, convertors and switchgear, to battery energy storage, grid digitalisation and HVDC interconnectors, Tim's division delivers essential products and services for TenneT's fast-growing investments.

As Siemens Energy works with TSOs from around the world, it has an international perspective on TenneT's reputation in the energy transition. "TenneT is recognised for taking a pioneering role. They were the first to install HVDC platforms in the North Sea to connect offshore wind, and the first to propose framework agreements as a way to meet the massive demands of offshore development. Other players are happy TenneT took the lead and learned the lessons."
As for the strength of the partnership, Tim says the scale and urgency of the energy transition has changed the way that TenneT and Siemens Energy work together: "This is a long-term challenge that needs a co-operative strategic approach by supplier and TSO, not the traditional transactional relationship."
"As two large engineering organisations, we're confident in each other's expertise. We're always learning from the projects we do together – it creates a great team spirit."
However, the size of the two organisations can also create challenges, particularly when joint project teams involve hundreds of people. "In two large companies, there are different ways of working, commercial boundaries, targets and so on. There's always room for improvement in how we work together."

Tim also says TenneT and Siemens Energy "can push ourselves jointly a bit more" when it comes to standardisation of design in grid assets. He says the 2GW Program has been an important first step, but more can be done. "I see some other TSOs and DSOs taking a more standardised approach to substations, for example. They may not always be the best engineered solutions, but they help get projects done faster and at a lower cost. In a market that's growing 30% year on year, you need to take a more industrialised approach."
Although standardisation has clear benefits, Tim says collaborative bespoke solutions can deliver technological breakthrough for the industry to follow. An example is a new joint initiative to use recycled copper in power transformers. As just one transformer can contain 60 tonnes of copper, and the Siemens Energy transformer factory in Nuremberg makes up to 75 units per year, this is a significant step in circular resourcing and supply chain decarbonisation, saving an estimated 6,500 tonnes of CO_2 emissions by 2030. "It's a groundbreaking innovation," says Tim. "We both wanted to make a statement to the industry, showing that we stand for the circular economy and decarbonising the supply chain. These are the lighthouse projects the industry needs."
Ultimately, Tim says this and other collaborations between Siemens Energy and TenneT show the power of their combined commitment: "We strongly believe in our strategic partnership. We rely on each other. We face complex projects and work through the details together to get them done. That's how partnership works."

"This is a long-term challenge that needs a co-operative strategic approach by supplier and TSO, not the traditional transactional relationship."

Create a safe and inspiring workplace

Our people and others working with us to deliver grid capacity in time for customers are key to ensure we are able to deliver. We must ensure that current and future employees experience us as an employer of choice and a safe and inspiring workplace, by having sufficient attention for safety, both physical and psychological and an inclusive, diverse and equitable working environment. Ensuring we and our partners in the supply chain have the appropriate workforce is key to being able to deliver our societal task.

TRIR	Target
4.0	3.7
NL: 1.9 | DE: 5.7	
2023: 4.5	
2022: 4.9	

Absentee rate NL	Target
3.6	3.0[1]
2023: 3.9	
2022: 3.7	

Percentage of female inflow of total inflow	Target
32%	32%
NL: 29% | DE: 34%	
2023: 32%	
2022: 33%	

Absentee rate DE	Target
3.3	3.0[1]
2023: 3.4	
2022: 4.1	

Percentage of non-Dutch non-German inflow	Target
11%	10%
NL: 12% | DE: 10%	
2023: 11%	
2022: 9%	

[1] No target value for absentee rates, however a value TenneT strives for.

Introduction

At TenneT, we build, maintain and operate critical infrastructure that powers society today and supports our journey towards a renewable energy future. Our people are our foundation and key strength and it is their combined effort, teamwork and commitment that achieves these crucial goals for society.

To realise our rapidly expanding portfolio of investments and accelerate building an energy system that can support a decarbonised economy, we focus on providing a safe working environment for the people working for and with us. We must have enough qualified people on board to complete the task ahead of us and ensure they make it home safely, every day. This is a core value in our work. In 2024 we showed our ongoing commitment to safety, making progress in embedding our centralised Health, Safety and Environment (HSE) structured approach throughout our organisation, following its introduction in 2023 (please refer to section 'Creating a strong safety culture so our people can thrive' hereafter). Standardisation of design and guidelines is key to our sharpened strategy and applies to how we manage safety – clarity and standard processes are catalysts to our ambition to build faster in a safe environment.

With safety as a prerequisite for everything our people do in their work for us, we work to ensure that we recruit, retain and develop the talent we need to meet our growth objectives, so we can ultimately deliver for our customers. To

this end, it is essential that TenneT is an employer of choice in an increasingly competitive labour market, especially for technical talent.

In 2024, we devoted further attention to our people strategy by revisiting and updating our vision and goals. This means that we are focusing our HR efforts on the following five ambitions: to achieve our growth targets and plan ahead; to provide a seamless employee journey; to enable leadership excellence; to develop our people; and to use technology to continuously improve. We believe that all five elements are crucial to the success of TenneT's strategy.

We focus on enhancing and embedding Inclusion, Diversity and Equity (ID&E) across TenneT so we continue to build a diverse workplace where every individual feels seen, safe and included. This is crucial to achieving our growth ambitions as we know that only through a diverse workforce we do have the capacity and different points of view to foster innovation and safeguard our future performance.

It is essential that we have a competitive position in the relevant international labour market and that we take a long-term view to achieve our wider goals at TenneT. While we have a net growth target, we need to recruit more people to account for the outflow of employees, internal movements and part-time workers. To support the further growth of TenneT, we intentionally work on prioritising and filling the positions needed to ensure business continuity, taking the challenging market and changing employee needs into account. This requires finding people with the right skills and competencies while paying attention to succession planning and development of our people.

In the tight labour market, it is essential that TenneT offers an inspiring place to work, where our people grow professionally and personally, feel safe and supported to be their authentic selves.

How we managed this topic in 2024

Currently TenneT has 8,349 employees, working in the Netherlands (3,383) and Germany (4,966). In addition, we have 1,344 valued colleagues who are externally contracted to us, such as our contractors on site or colleagues working on a project basis. To deliver on the ambitious targets needed to achieve Europe's climate goals, we continued to grow, adding more than 1,800 new employees to our own workforce in 2024. With around 400 employees that left TenneT, a net increase of employees is realised of about 1,400 employees.

At TenneT we aim to provide a streamlined employee experience and we are exploring ways to use technology to continuously improve. Despite the tight labour market with many parties competing for the same talents, we still have managed to fill almost all open positions. The effort and improvements were possible due to our applicant tracking tool and process adjustments and the joint efforts between hiring managers and the talent acquisition team. We continue to seek out ways to use data and technology to work smarter, not harder, so that we can ensure we have the people in place to execute our strategy and deliver our societal obligations.

However, maintaining a net inflow of FTEs became harder in 2024 as more external contract workers left TenneT due to legislative restrictions on interim contracts, particularly in the Netherlands. Current law limits the term of interim contracts. As many of these contracts are coming to an end, we are seeing a larger attrition level than normal. Recruitment is also more challenging as an increasing number of employees make internal moves to new positions, requiring vacant positions to be filled. During 2024 we also worked on our strategies regarding future talents, how to collaborate with external partners and identify new ways of training international candidates so they can adjust better in our local working environments in the Netherlands and Germany.

Regarding safety, we continue to work thoroughly to improve our performance and to achieve our zero-harm ambition. TenneT has taken substantial steps over the past few years to introduce a new approach to safety, which is leading to better performance as the Total Recordable Incident Rate (TRIR) decreased in 2024 to 4.0, compared to a rate of 4.5 in 2023. The trend in this rate has been impacted by a change in definition as explained in the text box hereafter. Although our TRIR has improved by 11% and our severity rate by 30% year on year, these are still above target level.

In 2024, we updated the definition of our Medical Treatment Cases (MTC). In prior years, the applied definition was broader than required per international standards and increased the quantity of HSE events considered as MTC. This definition hence artificially increased our Total Recordable Incident Rate (TRIR), limiting our ability to compare our performance to other companies. The MTC definition now follows international guidance and the TRIR target for 2024 was adjusted to reflect this change.

We also monitor our absentee rates by country on a regular basis, as an indicator to understand the health of our workforce. In Germany, we recorded an absentee rate of 3.3 in 2024 (3.4 in 2023) and in the Netherlands a rate of 3.6 (3.9 in 2023). While we see a decreasing trend in short-term absenteeism with our employees, long-term absenteeism is increasing. This trend, particularly in the Netherlands as it is trackable there, is partly explained by a rise in mental health issues among employees during 2024. We will continue to monitor this closely (more on this in the section 'Creating a strong safety culture so our people can thrive').

To ensure we grow as a diverse and inclusive organisation, we track the diversity of our workforce. With 11% of new

employees being both non-Dutch and non-German, we met our target of 10%. We also worked hard to improve in other areas with respect to being an inclusive and diverse workforce. This includes, but is not limited to, areas such as gender diversity. In 2024, our female inflow accounted for 32% of new employees, meeting our target of 32%. More on our efforts to achieve this, is included in the sections hereafter.

Creating a strong safety culture so our people can thrive

Physical safety

The nature of our work carries risks, often involving working at height with high-voltage assets and with heavy lifting equipment and materials, onshore and offshore. Despite this, we must deliver a secure and stable renewable energy supply for society in a safe and responsible way. We are committed to building faster and delivering more together for our customers and know that the health and safety of our people is the foundation of this.

We want all people working for TenneT to come home safely every day and aim for zero harm in the workplace. At TenneT we view a strong safety culture as an enabler of operational success: as the scale and speed of our work increases our safety culture and standardised protocols provide a solid foundation of clarity, quality and efficiency upon which we can pursue our goals.

Across TenneT, we are proud of the steps we have taken to create a safety culture and view 2024 as a year of progress and good performance. In 2024, we started to reap the benefits of our new organisational approach to safety, which was introduced in 2023. This is a centralised, uniform and systematically applied approach to safety across all sites and locations where TenneT's employees and subcontractors work – whether it is offshore in Germany or on a construction site in the Netherlands. We have been working towards a clear aim since its launch: more structure and company-wide standardisation, ensuring everyone working for TenneT and our subcontractors speak the same safety language, executing their work in line with a set of safety standards and protocols.

> "At TenneT we view a strong safety culture as an enabler of operational success."

TenneT's safety management is centralised in our Health Safety and Environment (HSE) organisation, which introduced a new Safety Management System in 2023 and worked in 2024 to roll this out across our operations. A crucial part of this system is continuous improvement, meaning that any safety incident is analysed and learned from, with suitable system improvements identified and implemented.

The HSE team is also working to embed the TenneT safety approach with our contractors and subcontractors. We hold regular meetings with leaders from our partners and also embed our safety requirements into our contracts, with follow-up meetings to ensure compliance. In situations where discrepancies and non-compliances are identified, we act decisively and our policy is to immediately stop working and take corrective measures – at TenneT we must set the example for our people and for the wider industry. Simply put: if you do not work safely, you do not work with us.

In 2024 we continued to use the system for embedding our Life-Saving Rules (LSRs). These rules acknowledge that a safety incident is often not an independent occurrence, but in most cases an accumulation of small decisions. LSRs are designed to stop those wrong decisions from being taken. Speaking up about safety is crucial for this – in the process of creating a healthy safety culture reporting of incidents can increase, which is a sign of openness and transparency as issues increasingly come to light, which we encourage very strongly. We investigate every incident reporting to understand its cause and work to address this in a structural way with all parties involved, integrating learnings back into our processes and procedures. It is essential to understand our strengths and acknowledge areas for improvement so we can take the right measures to increase safety.

Psychological safety

At TenneT we recognise that safety goes beyond physical wellbeing – we must care for the psychological safety of our employees. As such, psychological safety at work is an explicit aspect of our internal safety programmes and trainings, including the Safety Leadership Programme 'Safety needs our energy'.

We are determined to ensure we provide our people with a safe environment where they feel confident to share their experiences with their team and manager, so that suitable measures can be put in place to protect their psychological safety. This is a commitment that extends from our Senior Leadership Team to team managers – we need our leaders to model the mindset shift and proactive attitude, so that everyone is willing and able to speak up, every time. In 2024, we appointed four confidants to ensure that our people have trusted counsellors to turn to and show our ongoing commitment to investing in a working environment of trust, inclusion and psychological safety. In 2024 we achieved high completion rates for our 'Safety needs our energy' programme, with 100% of our managers (employed as of July 2024) now trained – a milestone for TenneT that sets the safety requirements for all leaders in our organisation. This is a sign of our commitment to investing in a healthy safety culture by shifting mindsets and behaviours. Course completion is important and just the start, as safety is a culture we create together through good leadership and everyday actions.

We completed a TenneT-wide safety culture survey in 2024, conducted by an external consultant. In prior years this survey was conducted in separate units and departments. Now, we have an overarching view of how we are doing and how safety is perceived by our own people, who are at the core of our company culture. The outcomes of this survey show positive results, also indicating we are performing better than the industry benchmark.

To get a better understanding of the workload and work-related stress of our employees, we started researching the psychosocial workload (PSA) of our people in the Netherlands in 2023. The 2024 findings show that many of our colleagues experience a high workload and work-related stress and that mental health problems contribute to approximately 50% of long-term absenteeism. This is a trend particularly prevalent among office workers and we are committed to giving this the attention it deserves. Acknowledging this, we took several measures in 2024 to address the root causes, including leadership training and focusing more on mental health in our vitality programme. We also followed up on the PSA by running pilots in three units. The next step is to define an organisation-wide approach to psychosocial workload interventions, starting with a clear strategy.

In Germany, we conducted a survey in 2024 on the workload and psychological wellbeing of people involved in the SuedLink project. With a length of around 700 kilometres, this is a massive infrastructure project enabling the energy transition in Germany. The survey results were analysed and several measurements were initiated, including various workshops for leadership teams to define improvement measures. Furthermore, a health app (nilo.health) was piloted within SuedLink to provide online support around the clock for all employees, including external contractors. This pilot was successful and will be rolled out across TenneT Germany.

Diversity at TenneT

Non-Dutch/non-German employees newly hired

11%

NL: 12% | DE:10%

Number of nationalities

91

NL: 49 | DE: 89

Female/male/other %

29/71/~0

NL: 26/74/~0 | DE: 28/72/~0

External employees

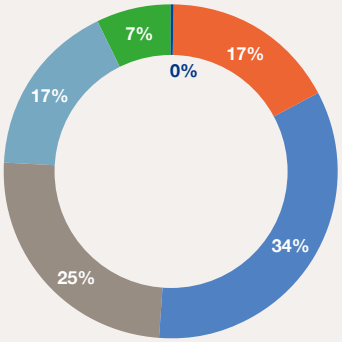
1,344

NL: 74% | DE: 26%

Internal employees

8,349

NL: 3,383 | DE: 4,966



Age distribution

Internal employees in %	NL	DE	Total
Under 20 years	0	0	**0**
20-30 years	10	21	**17**
30-40 years	26	40	**34**
40-50 years	29	22	**25**
50-60 years	25	12	**17**
Over 60 years	10	5	**7**

In 2024 the non-regulated activities employed 134 internal employees and 12 external employees.

Enhancing and embedding Inclusion, Diversity and Equity (ID&E)

To ensure that we are able to deliver grid capacity in time for our customers, we are aware that this requires us to look beyond geographical borders and to be an inclusive, diverse and equitable place to work to be welcoming for talent from all across the globe to work in the Netherlands and Germany. We are proud to have more than 90 different nationalities represented in our workforce in 2024. Diversity is visible in TenneT from entry level to the most senior members of our team. For example, our trainee groups are a diverse mix of participants from both the Netherlands and Germany, and other countries, with different educational backgrounds.

To not only be able to attract, but also retain talent with so many backgrounds, we consciously invest in making our workforce and our business ID&E-friendly. ID&E requires long-term efforts and attention to tackle unconscious and conscious biases so that decisions are made objectively when recruiting, promoting and developing our employees. This is a constant learning process, where our employees are the most important input contributors in our ID&E journey and cycle of continuous learning. Actions we took in 2024 relate to: encouraging our trainees to work cross-border during their traineeship, hiring two dedicated ID&E officers (one in Germany, one in the Netherlands), giving this topic more focus and dedicated resources and empowering networks to bring people together to create safe spaces for sharing

and dialogue, strengthening our corporate culture in the process. An example of this is the creation of a female mentoring programme, to foster mutual learning between people of different ages, genders and positions. Besides this, we joined forces with other Dutch grid operators and WomenInc. and organised a conference on gender diversity in the energy sector. In Germany, an internal LGBTI+ network was established this year, inspired by the strides made in this area by TenneT in the Netherlands in previous year, together with these other grid operators.

To evaluate whether our policies and actions are effective, we have set targets for both female and international new hires, which we monitor continuously. The target for new female hires in relation to total hires was set at 32% for 2024. TenneT has achieved 32%. The target for international new hires was set at 10%. TenneT has achieved 11%. Our ongoing collaboration with the Refugee Talent Hub in the Netherlands was strengthened in 2024 with the launch of a special programme called 'Energy Skills', which creates both learning and job opportunities for talented refugees. In this endeavour TenneT joined forces with other Dutch grid operators elevating this to a broad energy sector initiative. In the meantime, several of these newcomers have also become employees at TenneT. We also worked in 2024 to strengthen our internal readiness for refugee hires with the goal of creating a better onboarding experience for new refugee talent in the future.

Inspiring the best talent to join us and stay with us

To ensure we have the workforce we need to meet our strategic goals and create value for our stakeholders, we need to appropriately attract and also retain our talent. This is a significant challenge for TenneT, especially as we are seeking talent alongside other employers in our sector. We sharpened our people strategy in 2024 to meet these goals and are implementing initiatives to support achieving our ambitions.

Recruiting the right people

At TenneT, we want to facilitate growth and ensure timely filling of positions with people who have the right skills and competencies to drive the energy transition. In 2024, we focused efforts on developing a future-focused plan for our workforce, which will set us up for success in achieving our Target Grid growth ambitions. This plan is based on data-driven insights to help us make the right decisions as we step up our recruitment efforts.

In 2024 we also started rolling out the competency-based hiring approach that was developed in 2023. This means hiring people for their individual talent, interests and skills rather than solely for their experience. We also participate in the sector-wide consortium in the Netherlands via a matching platform, that connects workers with potential employees in the technical sector.

We also engage with talent earlier in their career and strive to remain in contact with them through 'talent pools', which help us to identify future recruits. To this end, partnerships with academic institutions (such as the TU Delft, TU Eindhoven, Universities of Erlangen and Bayreuth, or RWTH Aachen), play an important role in our recruitment efforts. In the Netherlands for example, we are closely involved in the Power Minor, a course on high-voltage power, offered at the Dutch universities of applied sciences of The Hague, Amsterdam, Arnhem and Nijmegen.

And in Germany, we established a future talent and partnership team in 2024, which focuses on increasing the overall pool of available talents for the energy sector. TenneT Germany is a founding member of the NET association, alongside TU Dresden, DNV Germany, 50Hertz, Sachsen Energy and others. This association will focus on short, mid and long-term strategies for attracting more talented people to the energy sector.

Retaining our valuable people

To meet the challenges ahead and fulfil our strategic objectives, it is essential that everyone at TenneT can grow and develop their skills. This is essential for TenneT to not only grow but also retain the people with the skill-set we need to drive the energy transition. It is especially challenging to retain younger generations and we must work to understand their needs and adjust our hiring, mentorship and onboarding efforts accordingly in this candidate-driven market. In 2024 we took a more structured approach to leadership development, based on our aim to support managers by training them with respect to their ability to lead, inspire, support, value and create learning opportunities for their teams to ensure business continuity and drive sustainable workforce growth. Our aim is to cultivate a more diverse and inclusive workplace and to strengthen our ability to identify, develop and retain our talented people, ensuring that they are engaged and supported in their career progression. This is key to our long-term horizon: to achieve our growth targets and build the grid faster, we need to devote attention to succession planning. We made progress in this area in 2024 by introducing a succession planning framework at all TenneT units. In addition to developing engagement and learning programmes we also analyse turnover to understand how we can improve our retention rates. We also made progress on our Job Grid 2.0 in 2024. This is a project that provides a structured framework for jobs within TenneT with a clear understanding of skills and competencies required for each position. This local competency framework is already in place in the Netherlands. For Germany a different approach is needed due to the existing tariff agreement and we will continue to work on this to ensure it is in place as a foundation for all career development in the future.

Workplace health and wellbeing

For our employees to perform at their best and contribute to the TenneT strategy, they need to feel fit, well-informed and engaged. Our long-standing Always Energy programme is an important way in which we support our people, helping them perform at their best by focusing on their health and wellbeing. This is an internal vitality programme, featuring workshops, trainings and events to ensure our people are energised and engaged, with a focus on: physical energy, mental and emotional energy, social energy and purpose or meaning. In 2024, we further developed the Always Energy programme with a broader focus on mental health with new offers like a health app, which can be used online at any time and offers different interventions, including talking to a psychologist. We see a strong Always Energy programme as a valuable and positive way to improve employees' wellbeing and address low engagement due to physical or mental health issues.

The TenneT work culture and practices are the core of employee wellbeing in the workplace and we are pleased that the illness rate at TenneT is well below the benchmark in both countries for 2024. Despite this, we strive to facilitate our employees in the best possible way to prevent absenteeism and illness. We offer a Preventive Medical Assessment as part of our ongoing programmes and initiatives to boost employee wellbeing in the Netherlands. To better understand how we are performing in terms of energising, engaging and informing our people, we continued our Pulse Check (quarterly employee survey) in 2024 across TenneT.

Furthermore, as a large employer with a diverse and international workforce, it is essential that we recognise that the workplace and attitudes to working norms are changing. We are aware of new ways of working and the shifting expectations of jobseekers in the post-Covid era and aim to support their wellbeing, psychological safety and motivation. In 2024 we have accommodated the growing demand for remote working, while also putting in place clear expectations for time spent in the office, for regular face-to-face team collaboration. In this way, a post-pandemic working trend has been managed into a new model of hybrid working across the organisation, taking into consideration local norms and the needs of specific teams. We will continue to devote attention to this to ensure we offer working conditions that suit both TenneT's needs and accommodate our employees' wishes.

What could prevent us from reaching our goals?

To realise our fast-growing investment portfolio and to achieve the goals of the energy transition, we need a significant number of new colleagues every year. However, we face ongoing difficulties in hiring the required resources for our planned operations and projects due to very tight labour market conditions. At the same time, we see a higher number of our workforce leaving the company, as well as more of our employees reaching retirement age. The companies we partner with and rely on to realise our projects – such as international engineering and energy contractors – face the same challenges in recruitment and retention and this will likely remain a challenge looking ahead.

To mitigate these issues, we continued our recruitment effort. Looking to the near future we will launch the new TenneT employer brand and target groups for recruitment efforts. We need to ensure that TenneT is always visible in the market and will continuously develop our employer brand to attract the right people to our organisation.

TenneT's challenges that come with our ambition as set in Target Grid 2045 are huge. Mental wellbeing due to the societal pressure of building faster leads to possible challenges on psychological safety and work stress levels. Long-term absenteeism due to mental health difficulties has been showing an upward trend over the past few years. To address this, TenneT will continue to offer health-related programmes, increased involvement of company doctors, training and coaching to maintain employee wellbeing. We also offer generous amounts of paid leave days and other benefits to ensure a good work-life balance of our employees.

As TenneT works in an intrinsically high-risk sector – with many of our people working at height or on busy construction sites, with heavy and high-voltage equipment offshore and onshore – safety is of primary importance in everything we do. We are acutely aware that safety incidents and major occupational or industrial accidents (such as fire, explosion, helicopter crash, vessel collision, structural failure or release of toxic substances) could result in fatalities, severely impact the environment, damage our critical infrastructure and harm our reputation.

During 2024, TenneT increased its investment in safety and environmental protection, making strides in embedding our HSE organisation and approach. We are stepping up our safety measures across TenneT. Safe work plans, workplace inspections, trainings and instructions, incident investigation and follow-up are all part of our journey to creating a proactive safety culture.

Antonella Battaglini, CEO Renewables Grid Initiative

"We proved many sceptics wrong."

The Renewables Grid Initiative (RGI) brings together TSOs and NGOs from across Europe. It promotes transparent, environmentally sensitive grid development to enable the steady growth of renewable energy and advance the energy transition. TenneT is one of the network's founding partners.

RGI was established in 2009, a time when calls for renewable energy were becoming increasingly loud. Environmental activists considered the transition to wind and solar essential to prevent dangerous climate change. At that time no one was talking about the electricity grid. Antonella Battaglini, CEO of the Renewables Grid Initiative, saw a clear need for TSOs and NGOs to work together to ensure renewable energy strategies were prioritised and to minimise the impact on nature and people. "There was a lot of public opposition. Many NGOs were calling for 100% renewable energy and TSOs were new legal entities: they did not understand each other. RGI created a space where they could work together."

Fifteen years on, Antonella says RGI has grown to 30 members and focuses on three aspects of renewable grid development: technology, environment and societal impact. "We proved many sceptics wrong: TSOs and NGOs can work well together, and must! We need to address the bigger picture of the energy transition. Everyone has a role to play, across the technological, political and economic arenas," she says.

Renewable energy, particularly offshore wind power, is key to TenneT's vision of an interconnected European grid and contribution to national and European energy and climate targets. Achieving these requires accelerated cooperation between diverse parties.

One of the main activities TenneT has been involved in with RGI was to understand how the regulatory framework needs to change to enable the creation of local benefits. "In a world where polarisation and conflict are on the rise, energy infrastructure development can and should become an engine for addressing local needs. It is essential to involve communities in constructive decision-making processes. This requires a favourable regulatory framework," Antonella says.

RGI and TenneT also collaborate in the FlatEMF project, alongside Europacable and other European TSOs. This initiative studies the potential impact of electromagnetic fields (EMF) from subsea cables on certain commercial fish species, with results expected in early 2025.

Reflecting on the partnership, Antonella says it's clear that TenneT values the work that RGI does. "TenneT is a very open and progressive TSO. Its new procurement policies are a good example of bold leadership: incremental changes are not enough, we need new ways of working together to achieve the energy transition," she says.

"Working 'together' means increasingly working also with those who have very different views and perspectives to our own."

Antonella sees room for improvement, too. "The energy transition is a complicated business and one we should approach from all angles. I'd like RGI to have the opportunity to work more with TenneT's technical teams, because the need to find new approaches to energy system planning is huge and can only be tacked in collaboration with others. Working 'together' means increasingly working also with those who have very different views and perspectives to our own. We need to welcome new players in whatever we do," she says.

Marjolein Demmers, CEO, Natuur & Milieu

"It's important we develop nature inclusive solutions."

Natuur & Milieu is a Dutch non-governmental organisation (NGO) that supports the 'nature inclusive' decarbonisation of the grid in the quest for net zero. It is a key stakeholder for TenneT, which, as a green grid operator, is committed to creating a sustainable energy future with minimal impact on the environment.

Natuur & Milieu focuses on climate change and biodiversity solutions in the Netherlands. It seeks to influence government policy and works with partner organisations, such as TenneT, to help bring about change in how the country develops, including any new energy infrastructure, so that it is more nature inclusive.
Marjolein Demmers, CEO of Natuur & Milieu, says: "There's no doubt that electrification and green energy is crucial to tackling climate change. With an energy-intensive industry in the Netherlands, plus the demands of mobility and households, the availability of green electricity is critical to our future. At the same time, as we transform our infrastructure and energy production capacity, it's important we work with partners like TenneT to develop nature inclusive solutions."

The Rich North Sea Project is one of Natuur & Milieu's joint initiatives with TenneT. At 57,480 km², the Dutch North Sea is the Netherlands' largest nature reserve, with a wealth of flora and fauna. Together with the North Sea Foundation, Natuur & Milieu works to achieve a healthy North Sea ecosystem that can absorb external influences – including the construction of offshore windfarms. This work is particularly urgent as studies, such as the recent OSPAR Quality Status Report, show declining biodiversity and habitat degradation across many areas of the North Sea.

Marjolein explains: "We're not just standing on the side passively. We are in the wind parks and in the sea. Our partnership has given us a deeper understanding of the complexity of TenneT's work and the challenges they face. We learn from them and they also learn from our knowledge about the North Sea ecology and inclusive design."
"For example, we've organised workshops with TenneT on the process of developing new infrastructure and how important it is to engage early on nature-inclusive considerations. This often leads to a different design approach which benefits ecosystems and also helps TenneT as it helps avoid delays in planning."

Marjolein appreciates the proactive approach TenneT takes to their partnership: "They're very open to our perspectives and keen to overcome obstacles. It can be complicated as there are procedures to follow, and innovating is never straightforward. But they're committed to learning, understanding, and finding mutually beneficial solutions."
This partnership has the potential to develop further too. For example, Natuur & Milieu is in discussions with TenneT about sharing resources for offshore monitoring activities: "There's a lot of demand for research vessels, so it makes sense for us to pool resources and share a vessel when possible."
And how does Marjolein think TenneT can further improve? "It would really help if TenneT could use its powerful voice to speak out more clearly and amplify our messages about the importance of nature inclusive design in the development of infrastructure. They could make a big impact by talking more openly and publicly about how crucial it is to work with nature. This could help prevent ecological boundaries becoming a block to the energy transition."

"Nature inclusive design is about creating infrastructure and assets that accommodate nature."

Transition to a brighter energy future within social and planetary boundaries

As a European TSO, the main positive impact we have as a company is driving the energy transition to support Europe's goal to become the first climate-neutral continent by 2050. Whilst doing this, we strive to reduce the environmental impact of our operations and minimise our carbon emissions.

Reduction of carbon footprint compared to base year 2019
(Scope 1 and scope 2 market-based emissions)

93 %
2023: 20%

Target
95%

Percentage of non-virgin materials procured

2%

Target
N/A

Number of environmental incidents

171
2023: 190
2022: 97

Target
N/A

Percentage of supplier visits performed that meet our standards
(of a.o. quality, sustainability, etc.)

77%
2023: 82%
2022: 86%

Target
N/A

Percentage of recoverable waste

97%
2023: 75-90%
2022: 75-90%

Target
N/A

Introduction

The world's dependency on finite natural resources is reaching its limit. Not only will these resources be running out in the course of time, but their use is impacting climate change and harming the natural environment. As a result, society needs to transition away from fossil towards renewable sources of energy – and this is where TenneT adds value. As part of our responsibilities as a TSO, we develop the assets, knowledge and innovations to build a reliable and affordable future-proof grid that supports the EU's net-zero ambitions. At the same time, we must ensure we operate within social and planetary boundaries and drive sustainable change together with our stakeholders.

As a TSO, our biggest impact lies in the assets and connections we build, which support the energy transition and reduce emission of greenhouse gases (GHG). To that end, we are pleased that around 86% of electricity consumption in Germany and 100% in the Netherlands came from renewable sources in 2024.

However, as we prepare our grid for the future, we are conscious there are ways in which we have an adverse impact on the world around us. Our Sustainability Framework consists of four topics: climate, circularity, nature and human rights. While enabling the energy transition and delivering for our customers, we strive to manage these topics responsibly and create a positive impact.

Procuring and producing the materials needed to build our assets on land and at sea, operating the assets to ensure a reliable energy system and effectively managing the emissions which result from our own operations all pose risks to the environment and society. As the energy transition is a global challenge involving a wide array of other parties from the energy sector and the associated value chain, our sector's demand on resources and impact on the four topics listed before is growing along with our investment portfolio.

At the same time, the expectations from our stakeholders – such as governments in the areas we serve – are increasing, demanding more effort to limit the environmental and social impacts on the world around us.

Through our climate, circularity, nature and human rights ambitions, we aim to shape what we believe is necessary for a responsible growth path, while supporting Europe's goal to become the first climate-neutral continent in 2050. Our efforts are geared towards tackling emissions across our scopes, optimising the circular use of materials for our assets, protecting nature and advancing human rights.

How we managed this topic in 2024

Climate

The largest positive impact that TenneT has in terms of climate action is to enable the switch from a fossil fuel-driven economy to a climate-neutral economy by connecting renewable energy sources and transmitting the generated electricity. Where we have a negative impact, in the form of our emissions, we are also taking important steps. The majority of our direct (scope 1) and indirect (scope 2) GHG emissions results from our use of the insulating gas SF_6 and our grid losses, which is the electricity lost during transmission across our grid. For our indirect scope 3 GHG emissions, the biggest impact comes from our purchased goods and services and capital goods.

We have three main levers in place to manage our climate impact:

- We aim to reduce our direct and indirect emissions.
- We green the emissions from our own operations as a TSO where reduction measures can not apply.
- As a last resort, we seek compensation for the emissions which we absolutely cannot reduce or green.

At TenneT, we consider it our responsibility to tackle our emissions across all three scopes, no matter how insignificant they seem.

The policy document that guides our climate mitigation efforts is our Climate Transition Plan. This is where we outline our targets across the three scopes. In line with the Science Based Targets initiative (SBTi), which we committed to in 2021, we are determined to contribute to the goals of the Paris Agreement. We have set 1.5°C-degree-aligned targets for our scope 1 and scope 2 market-based GHG emissions, with an aim to reduce them by 95% by 2030 (measured against a 2019 baseline). Our target for our scope 3 GHG emissions from purchased good and services and capital goods in our value chain is in line with the Paris 'well below 2°C' scenario, as we aim for a reduction of 30% by 2030 (with the same baseline).

Since our investment portfolio will continue to grow significantly over the next few years, our absolute targets are much more ambitious than these might appear. In relative terms, a 30% reduction would equal a much higher percentage in practice, which is why we have decided to stick to the 'well below 2°C' scenario for our scope 3 GHG emissions.

In order to pursue these targets, we identified a series of actions to take, which we outline hereafter and which are further explained in the Sustainability statements.

> "We consider it our responsibility to tackle our emissions across all three scopes, no matter how insignificant they seem."

Scope 1 (direct own emissions)

SF_6

TenneT needs to use special insulating protection for our high-voltage stations and distribution systems. Sulphur hexafluoride (SF_6) is widely used by TSOs as a highly effective insulating gas in switching installations. This remains essential for operations where safety and reliability of the grid are fundamental to guarantee security of supply. However, SF_6 is also a greenhouse gas, with one unit equivalent to over 24,300 units of CO_2.

While SF_6 leakages currently only account for 1% of our carbon footprint, we still aim to mitigate its impact as much as possible. We are working to find sustainable alternatives to SF_6 that provide similar safety properties without harmful emissions. At TenneT, our long-term strategy is to use gases for installations which have insulating properties with a Global Warming Potential (GWP) of ≤1, when at least two market parties are able to offer this.

Our actions to address SF_6 leakages relate both to our maintenance of existing assets and investment in new assets. In the Netherlands this year, we scaled up our efforts to manage leakages with a new, sharpened process that describes clear actions to take according to the different types of leakages and involves a step to inform the relevant authorities. This process is also aligned with the DSOs.

Furthermore, we set up a framework contract in the Netherlands for our 110 kV gas insulated switchgear (GIS) to only use alternatives to SF_6. We have also put in an order for a 380 kV AIS SF_6-free circuit breaker, to be installed for a project in Germany in 2026. This will serve as a pilot project for using SF_6 alternatives on extremely high-voltage circuit breakers.

We recognise that our impact on reducing SF_6 leakages can be greater when we partner with others. In 2024, we launched a new initiative in the Netherlands through Reddyn, our joint venture with Alliander, to resolve complex leakages by using an easy-to-apply and non-invasive solution that doesn't require installations to be dismantled. The solution can serve as a robust temporary fix until the components are due to be replaced. Moreover, we have launched a one-of-a-kind, five-year partnership with Siemens and Hitachi, who will each develop SF_6-free 420 kV hybrid GIS installations, to be installed by TenneT by the end of the decade. The focus for 2024 was on aligning the technical requirements of our research with suppliers to investigate what opportunities exist to develop such a solution.

Lease vehicles

The mobility of our employees, whether travelling to and from the office or out in the field, results in GHG emissions and is an area we are addressing with carbon-reducing policies. For example, in the Netherlands we moved to a diesel-free business fleet in 2024 and aim to move to a fully electrical fleet in the long-term.

Gas consumption

Gas usage for heating our offices, substations and other locations is also part of our scope 1 GHG emissions. To ensure we are meeting our climate-neutral goals regarding our locations, we have greened our gas consumption via guarantees of origin, green gas contracts or compensation through carbon credits.

Scope 2 (indirect emissions from generation of purchased energy)

Grid losses

As we transport electricity across our network, it is unavoidable that some electricity will be lost. Known as grid losses, these are measured as the difference between the electricity fed into the grid and the electricity delivered. Each MWh lost can no longer be used to power an electric vehicle or to keep the lights on. The emissions related to those grid losses fall within TenneT's scope of responsibility.

Grid losses depend, among other things, on the current, the voltage and the distance that electricity is transmitted. We cannot prevent grid losses from occurring: these are an inevitable part of electricity transmission over high distances.

To mitigate this, in 2024 we began to incentivise our suppliers to supply technology to reduce grid losses by integrating sustainability in some of our tenders and including the use phase of assets in our calculations. In some instances, such as in our Dutch framework agreement for overhead line conductors and in different cable project tenders, we therefore steer our suppliers to improve the conductivity of our assets, which helps to reduce grid losses. We are currently exploring how we can further improve and standardise this.

Currently, grid losses account for around 44% of TenneT's carbon footprint (scope 1, 2 and 3), based on a location-based approach. When applying a market-based approach, this would be around 7%.

The impact of our grid losses on the environment has always been determined by the local electricity grid mix: the average emissions per MWh are considered to be the environmental impact of that grid loss. When all purchased electricity related to these grid losses would have been purchased from climate-neutral electricity sources, that would mitigate our carbon impact from grid losses as well. It is not possible to purchase only renewable energy upfront. Therefore, we purchase guarantees or origin, equal to the amount of electricity lost for the previous reporting year.

We procure guarantees of origin (GoO) at a group level: for 2024, we have greened 100% of grid losses in the Netherlands and 87% of the grid losses in Germany.

Over the past years, TenneT has been actively pushing the debate on greening grid losses, which has resulted in more awareness but no regulatory change yet. This means that TenneT takes the financial responsibility for greening its grid losses in Germany, and it is its longstanding policy to do this in a balanced way – with a budget cap. Since we foresee no regulatory change in 2025, it is likely we will not meet our 2025 ambition to fully green our German grid losses.

Electricity use in substations and offices

Similar to gas usage, the electricity use in our offices and substations has an impact on our carbon footprint, which we mitigate by purchasing green electricity. In some cases, we are limited by regulation and cannot choose for renewable electricity suppliers. In these cases, we buy guarantees of origin and apply a market-based calculation to have a more accurate estimate of our emissions corresponding to our supplier base. In addition to this, where regulations permit us to deploy renewable energy, we install solar panels on our substations.

Scope 3 (indirect emissions in TenneT's value chain)

Purchased goods and capital goods

Our scope 3 emissions are spread across our procurement categories, but the majority of emissions come from a limited number of categories. Based on our latest analysis we estimate that more than 80% of our total scope 3 emissions are caused by the production, transport and installation of our biggest assets, such as cables, overhead lines, pylons, offshore platforms, transformers and substations.

To make further progress on our target of reducing scope 3 GHG emissions by 30% by 2030, in 2024 we entered a new phase of our 'Decarbonising the Supply Chain' project. This is how we aim to develop and implement sustainable sourcing strategies that promote the reduction of emissions along our supply chains while ensuring that the availability, affordability and quality of our procured products and services remain unaffected. In 2023 our focus was primarily on analysis and obtaining insights into our portfolio, whereas this year we have taken the project a step further and begun several pilot initiatives. These have included using concrete with a 30% lower carbon footprint for overhead line foundations, using recycled steel for pylons and for steel construction in our substations, and using renewable granules for the high-density polyethylene (HDPE) in our underground cable protection pipes. If these pilots are successful from a feasibility, cost and logistical perspective, we aim to roll them out in a standardised way in the coming years.

This year, we signed a memorandum of understanding with one of our biggest suppliers, Siemens Energy, to enter into a strategic partnership on decarbonising the grid supply chain. The first milestone of this new partnership is that Siemens Energy will produce all future power transformers and shunt reactor units for TenneT's German grid using 100% recycled copper. In the Netherlands, we awarded a new framework agreement for overhead line conductors to several suppliers using low carbon-aluminium. These are actions we have identified that can help us achieve our scope 3 upstream CO_2eq reduction goals. We are also looking to incentivise our suppliers to increase their use of green energy in producing, transporting and installing our assets and we are evaluating possibilities of changing product specifications to allow for more efficient material use or use of recycled materials. Also in line with our offshore 2GW Program partnership frameworks, we aim to enter into more CO_2eq reduction partnerships with suppliers.

Another priority this year was on improving the availability of primary and supplier-specific data. In addition to integrating sustainability within our tenders, we developed and distributed a questionnaire to all our suppliers and held Q&A sessions with our largest partners.

Our assets are produced along complex global supply chains. The majority of emissions in these supply chains therefore do not occur at our tier 1 suppliers, but further down the supply chain, e.g. in the extraction and refining of raw materials or in the production of semi-finished products. Stimulating our supply chains to reduce these emissions while not having direct control adds to the challenge of reducing our scope 3 GHG emissions by 30%. We must also factor in the rapid growth in grid expansion and investments in the coming years, which will lead to a significant increase in the procurement of goods and services.

Mobility as a result of our own activities

With respect to the smaller sources of scope 3 GHG emissions, we continue to improve our policies on mobility, motivating employees to make more environmentally friendly choices in the way they travel for work. We integrate our Mobility Vision with our hybrid and flexible working, so that employees can choose the means to do their job in the best way possible. We incentivise employees to cycle to work by awarding the same compensation for kilometres cycled

as kilometres driven. In 2024, we also introduced a travel policy to limit our climate impact, especially since many of our offshore business partners are located internationally.

TenneT's sustainable Revolving Credit Facility: linking climate performance to finance

To make progress against our climate ambitions even more visible, we have linked our financing costs to our climate performance. Secure access to finance is essential to ensure that we maintain the pace of our investment portfolio.
An example of this is our EUR 3.3 billion sustainable Revolving Credit Facility (RCF), which is linked to sustainability performance indicators and targets. In practice this means that, depending on the realisation of our climate-related KPIs, a discount is applied to the interest margin of the RCF. This is related to the percentage of green energy use of our stations (100% in 2024 vs 100% in 2023) and our offices (100% in 2024 vs 100% 2023). It is also linked to the net carbon impact of mobility per employee against the total number of employees (0.5 in 2024 compared to 1.0 in 2023) and the net carbon footprint of leaked SF_6 gas divided by theoretical CO2 impact of banked SF_6 (0.07% in 2024 compared to 0.11% in 2023). To reduce our carbon footprint, we compensated for a part of our leaked SF_6 and mobility through carbon offsets.

Circularity

To facilitate the energy transition, TenneT must reinforce and expand the grid, which means using a variety of different materials to build, operate and maintain our assets. The extraction, refining, use and disposal of these materials is one of the key drivers of the negative environmental and societal impacts we have as a TSO. There is a risk of becoming overdependent on these materials at a time when competition is increasing, caused by crises and geopolitical tensions, which might expose us to supply chain disruptions, price volatility and longer lead times. It is therefore important from both an environmental and business perspective that we shift from a linear to a circular model of material use. This way, we can make a positive impact by incorporating circularity within our activities and promoting circularity with our partners.

In 2023 we announced the launch of our first Circular Economy Strategy, which included a common understanding of circularity for TenneT, a mission statement, a circular economy framework as well as targeted KPIs (Key Performance Indicators) to measure our performance. In 2024, we moved into the implementation phase of this strategy, focusing on the three pillars of circular design, circular procurement and circular outflow.

This year we developed a set of circular design principles that will provide guidance for advancing circularity in our assets and projects. We are looking to review six of our focus asset categories in 2025 for these circular design principles to identify where we can improve on circular design and therefore remove potential barriers for circular procurement and outflow. In the same asset categories, we will also dive deeper into the potential recovery of our assets to better understand the extent to which our materials can be recycled or even re-used at the end of their intended useful life. We have estimated the potential recovery of our procured assets for the first time in 2024, which is an assumption-based figure of 98.7%.

For circular inflow, we have set a target for our copper inflow to be 40% circular by 2025. We measured the circularity of our overall inflow for the first time in 2024, which is an assumption-based figure of 2%. In 2025, we will look to further improve our data maturity. We aim to bring four further focus materials to the same level as copper, measuring their circular inflow based on supplier-specific data and setting quantitative targets. These are steel, aluminium, concrete and plastics. To pursue our target of making our material inflow more circular, we have introduced several measures this year that have set a strong statement of intent. In line with our scope 3 emissions reduction target of 30% by 2030 and as outlined in the respective section before, these include using recycled steel, renewable HDPE and recycled copper.

For circular outflow, we are working to strengthen the data availability for our waste management by engaging our contractors to share their data with us. We are contacting them directly and holding Q&A sessions to facilitate and accelerate the exchange of data. We are also taking steps to digitalise our processes, having piloted a data management tool this year while preparing to tender a tool for future use.

To bring circular procurement and circular outflow together, we are also investigating opportunities to completely close and shrink materials loops with our supply chain partners. For instance, we investigate whether we can use the old copper (or steel or aluminium) from our own assets at end-of-life in the production of our new assets.

The availability of data and information upstream and downstream our value chain is one of the greatest challenges when it comes to circularity. Our work is most effective when we have a clear picture of what our supply chain looks like, how our assets are produced and what happens to them at the end of their life. Introducing circular economy initiatives can, however, be complex, and is often a matter of debate and balance. It is also disruptive by nature, involving changes to established processes and increased collaboration between many different stakeholders.

Nature

In driving the energy transition, we can have a positive impact on the natural environment by helping to reduce carbon emissions and the harmful effects of climate change. Yet to do this, we need to construct and operate our assets on land and at sea, which can disturb natural habitats and affect biodiversity. As part of our ambition to operate within planetary boundaries and drive sustainable change, we look to minimise these negative impacts while maximising our

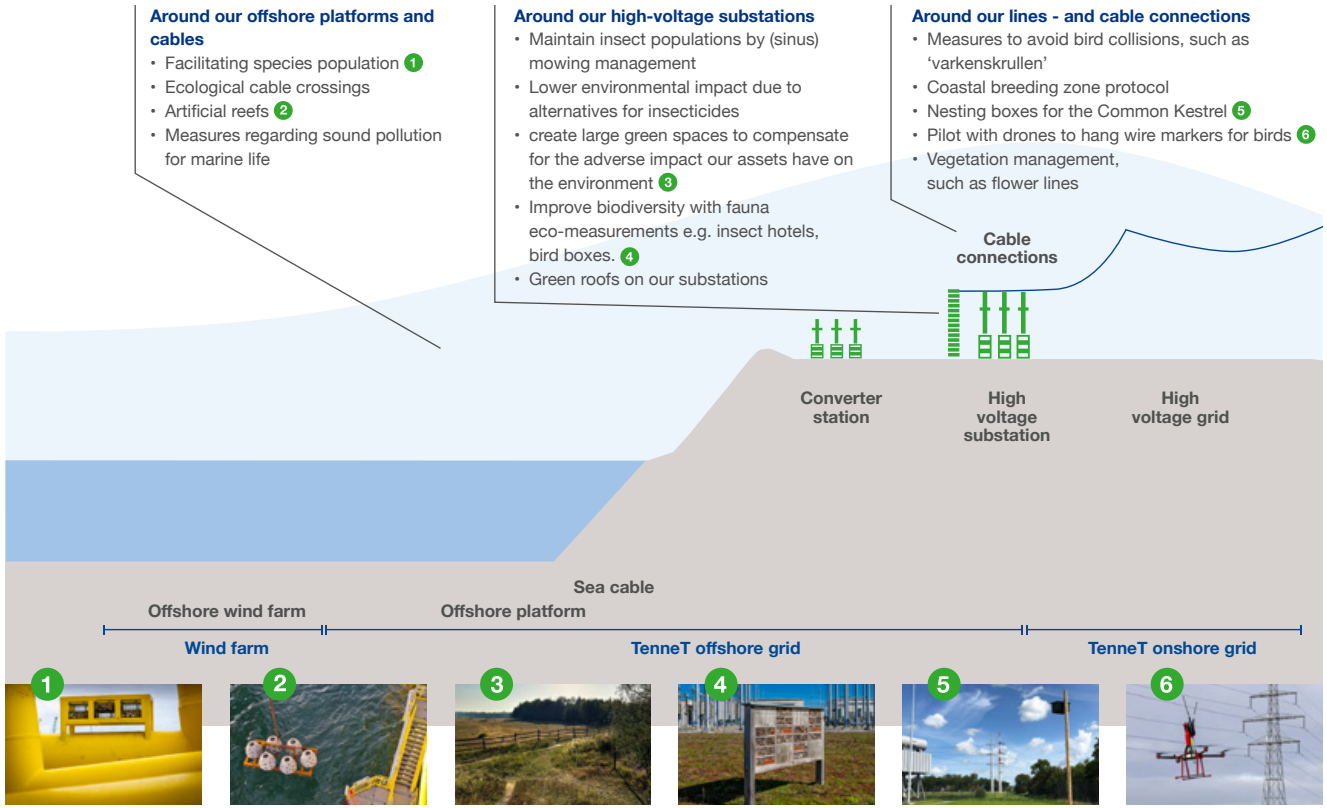
positive impacts, all with a goal to reduce our net impact on nature to zero.

To make progress on our biodiversity ambitions, we include details on nature commitments in our investment plans. Currently each proposed investment contains a 'Commitment to Nature' paragraph detailing a description of the anticipated impact on nature, the measures to mitigate and the opportunities for positive impacts.

A large focus for TenneT in 2024 has been on developing our new nature strategy, which will launch in 2025 and concentrate our efforts in addressing nature issues. As a basis for the strategy, we are using a mitigation hierarchy that defines our priorities and guides our actions along the lines of avoidance, minimisation, rehabilitation or restoration and compensation. Though the strategy is yet to come into force, this structured thinking is already influencing our approach to nature today. For example, we have developed KPIs for nature at a unit level to increase the sense of ownership and responsibility across our organisation for our shared nature ambitions.

Our new nature strategy will serve us well as we address the challenges inherent to an expanding grid. With more assets, more risks exist that we adversely affect the natural environment. At the same time, we see opportunities to lead in enacting effective green measures that improve rather than harm biodiversity in the locations in which we operate.

To take action to reduce our impacts on nature, we carefully track the number of environmental incidents, such as leakages of SF_6 gas, oil leakages from our assets and other occurrences. In 2024, we recorded 171 environmental incidents (compared to 190 in 2023). As the number of investments and activities needed to drive the energy transition increases, so too does the number of potential incidents. This year we also recorded 2,869 litres of oil leaked from cables in 2024, compared to the 2,698 litres reported in 2023. We consider every incident that occurs one too many and we are aiming to learn from the root causes of these incidents.



Our impact on nature primarily relates to where our assets are located when building, maintaining or operating them. This is mainly around our offshore platforms and cables, around our high-voltage substations and around our lines and cable connections. Taking into account the biodiversity around these areas is an important lever for achieving our nature ambitions.

Biodiversity measures around our onshore assets

As an example of how we turned our policies into actions in 2024, we were a signatory of the Sector Accord for Nature Inclusive Infrastructure alongside Alliander, Enexis and Gasunie, all of whom primarily work with onshore assets. This Dutch agreement includes an ambition for the collective infrastructure to have a positive impact on nature by 2040 and specific measures for all parties to follow. One of these is including nature requirements in tender processes for contractors. TenneT already had this policy in place, but we are now held accountable for it and can share best practices with our Sector Accord partners.

In Germany, we launched a new programme this year to create large green spaces to compensate for the adverse impact our assets have on the environment.

To reduce our impact on wildlife, we work with the right partners to identify high-risk bird spots and implement animal-friendly bird barrier measures. We also work to protect nature in the immediate vicinity of our assets. For example, in 2024 we installed 16 nesting boxes for the common kestrel near our stations. These serve multiple purposes, including creating better breeding conditions and preventing the birds from making nests in our installations.

Biodiversity measures around our offshore assets

Our policy for addressing our impact on nature around our offshore assets revolves around the concept of 'Nature-Inclusive Design' (NID). This means we incorporate eco-friendly designs and ecological measures in our projects, such as fish enclosures. To gain more knowledge on the effectiveness of these kind of measures in marine environments, we have concluded our three-year monitoring programme of the Hollandse Kust (zuid) eco-crossing pilot. Among our main findings were that calcareous rocks do not seem to influence the settlement or success rate, but rock size seems to be a good predictor of biodiversity.

Open Innovation Programme and green substation

As part of our Open Innovation Programme this year, we invited parties to collaborate and help us develop innovative solutions to make the control buildings of our substations more sustainable. In pursuit to combine many of our green measures and raise the ambition level even further in an integrated initiative, we are working on a pilot project to build TenneT's greenest ever substation.

Human Rights

Ensuring that all workers, irrespective of whether they are working for us or one of our contractors, are able to work under proper working conditions is key for them to help us deliver the energy transition in a sustainable manner. Those working outside our offices are especially vulnerable to the risks of working with heavy material and high-voltage equipment.

In order to accommodate for the accelerating speed of the energy transition and in accordance with our offshore development plans, formed by the governments in the areas we serve, our procurement and construction activities outside of Europe (specifically in South- and East-Asia, and the Middle-East), where it is more challenging to ensure our policies and procedures are applied compared to locations closer to the areas we serve, are increasing. In addition, working at faster pace to deliver more grid capacity for our customers and to realise the energy transition might impact the lives and working conditions of our value chain workers. The increasing speed at which we will have to deliver our projects could result in other impacts, such as exceeding working hours.

Our offshore construction activities are partially based in South- and East-Asia (including China, India and Singapore), and the Middle-East (including Bahrain and the United Arab Emirates) where there is a significant risk of forced or compulsory labour for value chain workers. This risk is widespread in these geographies and not related to individual incidents. As a result, material impacts for our value chain workers are particularly at risk in these geographies. We have a prioritised list of rights of value chain workers that make up our 'salient rights'. We have identified these based on possible material impacts and we have defined our human rights strategy and roadmap based on our learnings from these salient rights and value chain engagement on these rights. The material (or salient) matters in the social domain are related to the safety of our people and those that help us build the electricity grid of the future. For the latter, topics like forced labour, decent wages, adequate working hours, collective bargaining and the right to adequate housing are also salient rights.

Our human rights policy addresses the broader set of human rights and the salient rights and this policy applies to all value chain workers. Here, we commit to respecting international human rights standards (including the International Bill of Human Rights and the ILO Declaration on Fundamental Principles and Rights at Work), as well as to the UN Guiding Principles on Business and Human Rights, OECD Guidelines for Multinational Enterprises and the UN Global Compact. A more detailed description of what these commitments mean in practice, and what we expect of our suppliers and contractors, can be found in our human rights policy document (p.2-3).

In line with our human rights commitment and roadmap, we have taken several actions to prevent or mitigate negative impacts on our value chain workers. This relates for instance to engaging with other companies to build leverage. An example of this is our Multi Stakeholder Initiative on worker welfare regarding our Singapore yard: TenneT joined to work with a group of businesses in the energy sector (BP, Equinor, Ørsted and Shell), to further develop the Worker Welfare Group, our partnership focused on labour rights and worker welfare requirements within the marine construction sector. This group has developed a set of principles and guidelines to support, in the first instance, the Singapore marine construction sector to meet international standards for worker rights and worker welfare, particularly focusing on responsible recruitment, improved accommodation, better transport and improved access to grievance mechanisms. We have engaged with key stakeholders to advocate for systemic improvements and are also working with local organisations to facilitate access to remedy for workers. What is more,

engaging with credible proxies of value chain workers and other industry peers helps us in achieving our objective of building a robust due diligence policy. In that respect we have joined the International Responsible Business Conduct (IRBC) for renewable energy. Furthermore, we are continuing to set up structures within our projects to manage grievances and the frequency of stakeholder engagement also helps us with this objective.

The size of our supply chain and the number of suppliers we have does make our work on human rights challenging. Some of our partners may have less mature human rights management or come from countries with systemic human rights issues that no single business can solve. But the first step is acknowledging the scale of the task and working towards more responsible business practices. This is also why collaboration offers us a greater chance of creating longer-term impact.

Based on our risk assessments and stakeholder input, we understand that there might be impacts in our upstream value chain, more specifically in Asia related to our offshore portfolio. In line with this understanding, this year we became aware of forced labour indicators in the value chain of one of our suppliers. After an in-depth analysis and engagement with our direct supplier, we have drafted a corrective action plan and further engaged with peers in the region to use our collective leverage and drive change in the region.

In December 2024, TenneT was associated with a Chinese organisation, which was linked to forced labour practices. The allegations however do not connect to TenneT's direct supplier, but the mother company of the major stake shareholder of one of TenneT's direct suppliers. In this specific case, we are assessing the situation with a third-party expert organisation to decide on appropriate actions. Our policies as indicated in our supplier code of conduct and commitment to human rights prohibit forced labour and we are committed to eradicate this issue from our supply chain.

What could prevent us from reaching our goals?

To prepare for the grid of the future, we need to scale up our activities and operations in the coming years. At the same time, we must ensure this growth does not come at the expense of the environment or society. It is a challenge for TenneT to find the balance between supporting Europe's ambitions of reaching carbon neutrality by 2050, and keeping the negative impacts resulting from our actions to a minimum.

Regarding our scope 1 GHG emissions, SF_6 leakages currently account for less than 1% of our climate footprint, yet we are working hard to reduce our use of this insulating gas. We started strategic partnerships as an effective way for us to find alternatives to SF_6 and solutions to mitigate against leakages.

Grid losses are a major contributor to our scope 2 GHG emissions. Unfortunately, the nature of power transmission makes grid losses inevitable. It is also challenging to lower our grid losses when using materials like aluminium as a conductor in our power lines. It is not as scarce as copper, for example, which is a positive, but it is less effective, meaning grid losses are higher. When it comes to greening our grid losses, we are limited in what we can do in Germany due to regulations in the country, and we do not expect to see a change in policy in 2025.

When we look along our supply chain, there are emissions that need to be reduced, but which we do not have direct control over. This is why we encourage and incentivise our supply chain partners to act sustainably to help us reach our target of reducing our scope 3 emissions by 30% by 2030. Another challenge here is the expansion of the grid, which will require us to procure more goods and services, and potentially engage with suppliers with less mature human rights policies in place. There are risks to nature here too, as the more assets we build, the higher the possibility of disrupting biodiversity.

Under certain conditions, TenneT might still depend on the usage of environmentally harmful raw materials and gasses, such as the mining of rare metals, if there are no other viable solutions available. This could cause an environmental or ecological impact in countries where this material or gas is excavated or used.

Resource circularity will become increasingly important in the years ahead. So to ensure the measures we have in place here have a greater positive impact, we will need to improve our data availability along our value chain. Having more accurate insights can allow us to take more targeted action, which is particularly valuable given the complexity of introducing circular economy initiatives to embedded, long-standing processes.

Jan Vos, Chairman, NedZero

"The next generation is counting on us."

NedZero is the trade association for wind energy in the Netherlands. Its ambition is to decarbonise the entire Dutch energy system, working with 300 members to advocate for wind energy projects and policy that supports a green future. NedZero is a valuable ally to TenneT as the two have shared goals relating to the energy transition in the Netherlands, and beyond.

The North Sea is a vital source of renewable energy for the Netherlands, Germany and other European countries. As such, the development of North Sea wind power is an essential part of TenneT's target grid 2045 strategy, requiring strong partnerships with other offshore stakeholders. Prominent among these is Jan Vos, Chairman of NedZero, formerly known as NWEA (Netherlands Wind Energy Association).

Advocating for important infrastructure projects that facilitate the integration of offshore wind energy into the grid is a focus of NedZero's work. In 2024, this saw TenneT and NedZero working closely together on the Delta Rhine Corridor (DRC), with both partners strongly arguing for the inclusion of underground HVDC cables in this major infrastructure project. The DRC is part of a broader European integrated energy strategy, involving multi-pipelines transporting CO_2 and hydrogen. Both NedZero and TenneT advocated for the timely inclusion of electricity cables into the corridor, to connect offshore wind energy to the onshore grid and carry it deep inland. Jan says he was disappointed to hear of the Dutch government's decision to exclude the HVDC cables, announced in December 2024.*

"The DRC project is key to accelerating the energy transition and European Green Deal. TenneT's cables are crucial for electrifying the Netherlands and our industry. We fear this decision will lead to more grid congestion, more CO_2 emissions and less green electricity. These are the types of key decisions that we try to positively influence, and we will not give up – the next generation is counting on us to make the energy transition happen," says Jan.

NedZero is also strongly focused on the evolution of energy markets to support decarbonisation. Jan says there is still work to be done in creating a stronger business case for wind energy, as high costs can deter parties from bidding for offshore wind energy plots. "We can't sell all the offshore energy produced and shifting these costs to producers dampens our business case. There's still a lot of potential to adjust pricing on both the supply and demand sides. We must ensure that it's lucrative enough for capacity providers and producers to keep on constructing. TenneT has a role in this and knows it needs to be more cost efficient and find ways to use its existing infrastructure more efficiently," he says. Despite the challenges, Jan is pleased with the steps NedZero and TenneT are taking together. "Wind energy is already the largest supplier of electricity in the Netherlands. By 2030, 75 percent of our electricity will come from wind turbines. We need each other to ensure this keeps going in the right direction," Jan says.

"We have to make the energy transition happen."

* On the same day of this interview the Netherlands Minister of Climate Policy and Green Growth announced that the HVDC cables will no longer be part of the DRC project.

Sven Utermöhlen, CEO, RWE Offshore Wind

"TenneT is a key partner for RWE."

RWE is one of the largest offshore wind operators in the world, with over 20 years' experience in the development, construction and operation of projects. RWE is aiming to triple its offshore wind capacity by 2030, including projects in the Netherlands and Germany, where it is an important partner for TenneT.

With responsibility for RWE's global offshore wind portfolio, Sven Utermöhlen has a key role in the energy transition, working closely with TSOs to harness the power of clean wind energy.
Sven says northern Europe is particularly well-positioned to make the most of this opportunity: "The energy resource we have in the North Sea is almost unique in the world, with the combination of high and constant wind speeds and relatively shallow water over a large area."
TenneT and RWE work closely together to unlock this potential, with projects such as the OranjeWind wind farm in the Dutch North Sea. This will supply sustainable electricity to over one million households in the Netherlands when fully commissioned in early 2028. RWE is delivering this wind farm together with TotalEnergies.

"TenneT is a key partner for RWE, in offshore wind and the energy transition as a whole," says Sven. "Building the necessary grid infrastructure and offshore wind grid connection systems is of the utmost importance." He adds: "TenneT is one of the most experienced TSOs when it comes to offshore grid infrastructure."

Sven says the offshore wind market faces short-term challenges, with strained supply chains, rising costs and uncertainty about the financial risk of wind farm investment. He says this is causing some players to withdraw from the market. Furthermore, he is concerned about declining political and societal momentum behind the energy transition. "Very large infrastructure projects need societal support to make sure they happen," he says.
To maintain support and investment appetite, he says it's important for wind farm operators and TSOs "to make sure we go for the low-hanging fruit" in the offshore wind projects they prioritise.

RWE's close partnership with TenneT helps navigate these challenges. "We have common objectives to drive forward the energy transition, in particular on the synchronised development of offshore wind farms and the grid. There are strong relationships at all levels, from the board to individual teams."
Sven says RWE's relationship with TenneT has evolved over the years: "In the past, we had some difficult discussions, for example about TenneT accommodating new technology, or sharing available grid capacity between wind farms. Also, looking further back, I would say TenneT didn't always embrace its offshore role. However, things are different now. TenneT is more proactive and innovative and also fully embraces its offshore responsibility, seeing it as an enabler of the energy transition."
He concludes: "We can only make the energy transition happen if players like TenneT and ourselves move in the same direction. That includes individual projects, where the engineering only works if our technical designs literally fit together. And also in the wider sense, as we share the same objectives and interests. The scale of the challenge is enormous, so cooperation is the only way to tackle it."

"Building the necessary grid infrastructure and offshore wind grid connection systems is of the utmost importance."

Safeguard sustainable financial performance

As one of the largest investors in the energy transition in Europe, TenneT strives to build long-term value for society, while safeguarding its financial health and delivering healthy returns for capital providers, as well as raising the necessary external financing. The rising cost of grid investments has an impact on society, yet investments are essential to enable the energy transition for generations to come.

Underlying EBIT (EUR million)	**Target**
1,745	**1,680**
2023: 1,817 2022: 1,210	

Adjusted FFO/Net debt	**Target**
8.2%	**8.0%**
2023: 11.6% 2022: 11.1%	

ROIC	**Target**
4.7%	**4.3%**
2023: 5.8% 2022: 4.9%	

Introduction

As a leading electricity transmission system operator with a critical role in the decarbonisation of the energy system, TenneT has an important responsibility to society. The decisions made by us and other stakeholders in the energy system have a financial impact and are therefore considered carefully, when we balance the energy trilemma of affordability, reliability and sustainability. Securing supply today and tomorrow and enabling the decarbonisation of the energy system, requires substantial investments.

As the energy transition picks up speed, the cost is also rising considerably. As such, affordability is at the centre of the growing societal and political debate around the energy transition.

While the cost of building the future grid is a heavy burden, these are investments that the European economy and society cannot afford to miss. By delivering grid capacity and enabling the decarbonisation of the energy system, thereby powering a net zero economy, our investments will help to deliver long-term stability and growth, as well as competitiveness and security. Therefore, we have a duty to the current and future citizens of Europe.

Looking at 2024 and beyond, we are committed to providing an electricity system that balances affordability, reliability and sustainability. With Target Grid, we are taking a holistic, forward-looking, smart, and pragmatic approach to grid expansion. This includes making smarter use of our existing assets, harnessing the benefits of standardisation and economies of scale, as well as delivering more through partnerships and innovation. This requires leadership, a collaborative mindset, a discussion on risk appetite and a consistent and long-term energy policy that enables the whole energy sector to transform and make the needed investments.

The financial solidity of our company is a prerequisite to invest in the energy transition. As such, our mission to safeguard our financial health remains unchanged.

Together with our Shareholder, we are establishing a sustainable financing solution for our German activities, following the termination of the negotiations with the German government on the full sale of TenneT's German business. We are currently exploring participation in TenneT Germany by private investors, either through a private sale, or through a public sale via an initial public offering. In this regard, our Shareholder, the Dutch state, took significant steps. At 12 January 2024, TenneT and the Dutch state have agreed upon a shareholder loan facility of EUR 25 billion to safeguard the financing of TenneT's planned investments in the Netherlands and Germany for 2024 and 2025. At 21 February 2025, TenneT and the Dutch state have agreed upon a supplementary shareholder loan facility of EUR 19.4 billion, safeguarding TenneT's planned investments in the Netherlands and Germany for 2025 and 2026. The loans drawn from the facility will be granted at market conditions.

How we managed this topic in 2024

TenneT discloses its financial performance according to both underlying financial information and International Financial Reporting Standards as adopted by the European Union (IFRS Accounting Standards).

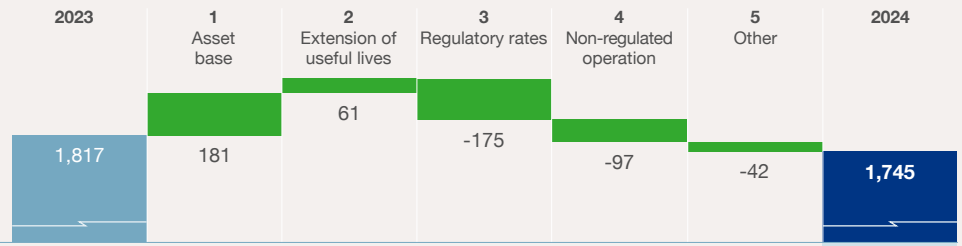
Underlying financial information is based on IFRS plus the principle of recognising regulatory assets and liabilities for all our regulated activities. This implies that amounts resulting from past events, and which are entitled to be received, or are required to be returned through future tariffs, are recorded as an asset or liability, respectively. TenneT's Executive Board is of the view that the presentation of underlying financial information provides additional relevant insight into TenneT's actual business, financial performance and, as such, prevailing economic reality. By comparison, the consolidated financial statements are prepared based on IFRS. Based on the prescribed treatment in IFRS, amounts to be received or required to be returned through future tariffs cannot be recognised.

A large part of the amounts to be settled through future tariffs is related to the costs TenneT must incur for ancillary services (in 2024 an amount of EUR 1.4 billion is settled), in particular to compensate for grid losses, to maintain the energy balance in the grid and to pay for alternative routes for the electricity when grid sections are congested or unavailable due to grid expansions (redispatch). As ancillary services require TenneT to procure electricity, these costs are directly affected by electricity market prices.

(EUR million)	**2024**		2023	
	Underlying	**IFRS**	Underlying	IFRS
Revenue	8,430	9,999	9,222	9,298
EBIT	1,745	3,204	1,817	1,424
Investments	10,637	10,637	7,730	7,730

Underlying EBIT group

Amounts in EUR million



Underlying EBIT group to IFRS EBIT group

A	To be settled in tariffs – Ancillary services	**1,434**
B	To be settled in tariffs – Other differences	**-692**
C	Auction receipts	**458**
D	Maintenance of the energy balance	**243**
E	Other	**16**
	IFRS EBIT group	**3,204**

1 As a result of the larger asset base, resulting from TenneT's growing investments, EBIT increased compared to 2023.
2 The Group reassessed its estimate for the useful lives of tangible fixed assets. Based on that review, the Group concluded that the useful lives of several onshore assets should be extended prospectively as per 1 January 2024, resulting in decreased depreciation.
3 Due to changes in the regulatory rates for return on equity in Germany, EBIT decreased compared to 2023.
4 The lower auction receipts are causing decreased results of our non-regulated joint venture and as such EBIT decreased compared to 2023.
5 No individual material items.

A Costs of ancillary services can be passed through and lead to revenue adjustments in underlying while invoiced to customers (resulting in IFRS revenue) in later years. The ancillary services settlement in 2024 is mainly based on the difference between actual costs and reimbursed cost in 2022. Furthermore, the actual costs for ancillary services decreased compared to 2023.
B Other differences relate to regulatory assets and liabilities in underlying that will be settled in future tariffs (resulting in IFRS revenue) in later years. They relate to among others the ex-post settlement of entitled investments and interest rates as part of the WACC which are settled two years later.
C Auction receipts lead to revenue in IFRS and will be given back via tariffs in later years. Not recognised as revenue in underlying.
D Costs of maintaining the energy balance are passed through in underlying as reimbursed in later years, while immediately recognised in IFRS.
E No individual material items.

Underlying revenue and EBIT

Underlying revenue in the year 2024 decreased by EUR 792 million to EUR 8,430 million (2023: EUR 9,222 million) year-on-year. Included in our underlying revenue is a reimbursement of costs made for ancillary services. Overall costs for ancillary services decreased, resulting in lower underlying revenue. Furthermore, revenue decreased due to lower regulatory rates for return on equity in Germany. This decrease is partly offset by an increase of revenue due to increasing ongoing investments, resulting in a growing regulatory asset base and higher onshore and offshore revenue.

Underlying EBIT decreased by EUR 72 million to EUR 1,745 million. The described development in revenue regarding lower regulatory rates regarding lower regulatory rates resulted, in combination with the decreased results of our non-regulated joint venture due to lower auction receipts, in decreased EBIT. The aforementioned is partly offset by an increase of revenue due to the earlier mentioned increasing ongoing investments, together with reassessed useful lives of tangible fixed assets resulting in decreased depreciation expenses.

The EBIT for the TSO Netherlands segment and the TSO Germany segment amounted to respectively EUR 625 million (2023: EUR 548 million) and EUR 1,087 million (2023: EUR 1,141 million) during this period. For our non-regulated businesses EBIT amounted to EUR 33 million (2023: EUR 128 million) during 2024.

IFRS revenue and EBIT

During 2024, our IFRS revenue increased by EUR 701 million to EUR 9,999 million. IFRS revenue mainly increased because of the higher regulatory asset base, as a result of our growing investments, resulting in higher onshore and offshore revenue in Germany and the Netherlands in combination with higher grid fee tariffs that included the reimbursement of the higher ancillary services costs of earlier years in the Netherlands. Contrary to underlying accounting, the IFRS result in these earlier years only reflected our higher costs, but did not account for the future reimbursements of these costs. The consequently higher revenue in 2024 is however partly offset by lower regulatory rates for the return on equity and includes lower reimbursement compared to 2023 due to decreasing expected costs for ancillary services in Germany. Furthermore, revenue decreased in Germany compared to 2023, due to an adjustment of EUR 535 million as a result of reassessed estimation assumptions for accruals regarding ancillary services.

In 2024, overall costs for ancillary services decreased as a result of decreased energy prices combined with lower grid losses. Lower volumes further contributed to the fall in ancillary services costs, compared to 2023.

IFRS EBIT increased by EUR 1,780 million to EUR 3,204 million mainly due to lower actual costs for ancillary services in combination with higher revenue, partly offset by decreased result of our non-regulated joint venture BritNed, compared to 2023.

Focus on affordability of the energy system

As the energy transition accelerates, the scale of investments needed to expand and modernise the electricity grid so it can support a decarbonised energy system is growing. These investments will have an impact on the development of grid tariffs in the coming years, leading to rising energy costs for consumers and businesses. We consider it our social responsibility too to address affordability.

We are continuously seeking ways to help keep the TSO part of the energy bills affordable. One of TenneT's realised initiatives, is the establishment of TenneT Reinsurance N.V., our in-house reinsurance entity, that received its license on 28 September 2024 from the Dutch Central Bank (DNB). As an insurer, it has to comply with the so-called Solvency II, a European regulatory framework, and the DNB acts as the supervisory authority. Having an in-house reinsurance entity will result in a reduction of insurance costs which is one of the investments' elements. In addition, we help by focusing on innovative technologies that help us increase the capacity of our existing grid. This reduces congestion costs as well as the need for new infrastructure. Efficient and flexible use of the electricity grid can also limiting the increase in grid costs. Long-term, affordability is a key pillar of our Target Grid 2045 vision. Using a back-casting approach allows us to plan for future needs in the most cost-efficient way, only building the infrastructure society will realistically need, planning ahead for the most efficient use of space and contributing to a new market design that supports decarbonised energy and harnesses the efficiencies of integrated national electricity markets.

Growing concern about affordability has led to a call from the business community and various industry associations to reconsider the sharing of investment costs. This call included some proposals to cover (part of) the investment costs through the national budget, rather than charging them to grid users, as is currently the case. From a systems perspective, we believe the current tariff model in the Netherlands provides a solid basis for a fair and efficient distribution of costs among those who benefit most from the grid infrastructure, with the added benefit of encouraging efficient use. The debate on grid tariffs is intensified by large differences within Europe with regard to rebate schemes for large-scale consumers (industrial). There are countries with energy rebates for large-scale consumers and countries without rebates and compensation schemes. To retain an attractive business climate and have a level playing field, it is important that there is agreement at a European level on how countries deal with compensations and subsidies for industry, as mentioned in the report of Mario Draghi about the future of European competitiveness. Without such a level playing field for industry, there will continue to be major competitive differences across countries. To combat energy poverty, we recognise the discussion in public that vulnerable households and businesses should be supported.

Investment and raising the necessary funding

In 2024, TenneT continued its strong efforts to drive the energy transition, investing a record EUR 10.6 billion in the grid (2023: EUR 7.7 billion). The increase is mainly related to increased investments in our 2GW Program – for example with the start of production of cables for two of the new 2GW offshore connections, BalWin4 and LanWin1 – as well as milestones being met on several critical onshore projects, such as SuedLink and SuedOstLink in Germany (please refer to 'Building the electricity grid of tomorrow').

In April, the Dutch grid operators published their Investment Plans. These give the regulator (ACM), the ministry, governments and market players more insight into their investments and projects for the next 10 years. TenneT expects to carry out around 700 major infrastructure projects. These include grid extensions, replacement investments, offshore wind farm connections and reconstruction projects.

In Germany, the four German grid operators, presented their Grid Development Plan (NEP) 2037/2045 to the Federal Network Agency (BNetzA). The current NEP contains scenarios for the years 2037 and 2045 and describes for the first time an electricity transmission grid for a climate-neutral energy system.

To maintain the pace and scale of our investments and safeguard our financial health, TenneT must continue raising external financing. The latter is supported by our financial policy to maintain a credit rating of at least A3/A- as formulated by the international rating agencies Moody's and S&P.

To realise this objective TenneT maintains a long-term average funds from operations (FFO) / Net debt (based on adjusted Underlying financial information) at 8.5% (with individual years of at least 8.0%). For the calculation of the adjusted FFO/Net debt ratio, which resulted in 8.2% in 2024 (2023: 11.6%), reference is made to note 11 'Capital management' of the consolidated financial statements. TenneT's large investment programme resulted in an increased debt position, which puts pressure on the adjusted FFO/ Net debt ratio and the ROIC.

TenneT maintains a broad and sustainable access to financing readily available and at the right cost. Part of those funds come from equity and the majority from borrowings. To raise equity, TenneT is exploring together with its shareholder the Dutch state alternative structural equity solutions for its German activities, in the public or private capital markets.

To finance TenneT's investments until the period that structural financing solutions are in place for both the Dutch and German investments, TenneT and the Dutch state have agreed upon a shareholder loan facility of EUR 25 billion and the Dutch state has announced a supplementary shareholder loan facility of EUR 19 billion, to finance TenneT's Dutch and German investments till the end of 2026. To refinance a EUR 1.1 billion green hybrid bond with a call date in 2024, TenneT successfully issued in 2024 a dual tranche green hybrid bond of EUR 550 million with a coupon of 4.625% and a non-call period of 5.25 years and EUR 550 million with a coupon of 4.875% and a non-call period of eight years, respectively. In line with TenneT's Green Financing Framework, proceeds will be used to invest in eligible green power transmission projects in the Netherlands and Germany. These are focused on projects connecting large-scale offshore wind farms to the onshore electricity grid and investments in the onshore transmission grid with the main objective to increase the transmission of renewable energy.

In Germany, TenneT provided support to secure EEG funding (German Renewable Energies Act or Erneuerbare- Energien-Gesetz) for the EEG payout. Costs of EEG payments are financed in full by the federal government and the BMWK (Federal Ministry for Economic Affairs and Climate Action or Bundesministerium für Wirtschaft und Klimaschutz). As energy prices and futures fell substantially since Q4 2023, an additional EEG funding need arose across all German TSOs throughout 2024. To help find a sustainable solution and avoiding further pre-financing of EEG contributions, TenneT and the other German TSOs held constructive talks with the German government, culminating in an agreement to provide an additional EUR 8.8 billion in 2024. As a result, the additional federal funding is sufficient for 2024. The EEG financing requirement for 2025 that the four TSOs have jointly calculated and published based on the EnFG (Energy Financing Act or Energiefinanzierungsgesetz) amounts to EUR 17 billion across all German TSOs without considering the account balance.

Towards a reliable and predictable regulatory framework to support our financial strategy

The majority of our revenue is driven by the regulatory framework. Stable, reliable, transparent and predictable regulation plays a critical role in our investments and operations, helping to enable security of supply, while also fostering and incentivising innovation and progress. Regulation also provides the framework we need to attract equity and debt capital for future investments in grid expansion, replacement and maintenance. On top of that, regulation also serves to maintain affordability of grid fees and energy prices towards industrial customers and end-consumers.

As the nature of our business and the scale of the energy challenge require us to think decades ahead to determine how and where to invest, we need to rely on a regulatory framework with a long-term focus. While regulatory periods are established for much shorter timeframes of typically five years or less, the underlying methodologies should provide a stable long-term regulatory framework. Grid operators need this solid regulatory foundation to earn a risk-adjusted rate of return on their investments and operational and ancillary costs.

The allowed income and tariffs of TenneT TSO NL are subject to incentive regulation by the Authority Consumer & Market (Autoriteit Consument & Markt, the 'ACM'). Within this regulatory framework, the ACM sets the methodology based on which the transmission system operators' tariffs are determined. The current regulatory period will last until 2026 and there were no significant changes in the regulatory framework in the current year.

The revenues of TenneT TSO Germany are derived from the development, expansion, replacement, operation as well as maintenance of the transmission grid and are subject to regulation by the German Federal Network Agency (Bundesnetzagentur, 'BNetzA'). Consequently, TenneT TSO Germany's overall business, financial condition and net income are – similar to TenneT TSO NL – sensitive to regulatory changes and decisions of the regulator. Such changes and decisions may impact the revenue levels of TenneT TSO Germany and may therefore impact its cash flows.

In this context it is notable that the 4th regulatory period in Germany began on 1 January 2024 and will last until 31 December 2028. In this new regulatory period, TenneT will see a reduced regulatory rate of return on equity in Germany. TenneT together with other TSOs and DSOs appealed against the BNetzA determination but the Federal Court of Justice rejected this in December 2024. In March 2024 TenneT launched two further appeals against BNetzA regarding the rate of return on equity. TenneT also argued that the new regulatory approach is discriminatory in the way it treats different areas of investment. BNetzA is considering the case put forward by TenneT. A discussion with BNetzA to move investment projects from the former regulatory refinancing instrument of the Investment Measure (IMA) structure to the Capital Cost Pass-Through (KKAuf) could result in an estimated additional revenue for 2024 and future years if agreed.

Grid costs

Target Grid and its back-casting model help us forecast grid costs and thus manage affordability in the longer term. According to our forecast, annual grid costs will grow substantially from 2024 to 2045 in both Germany and the Netherlands.

Having assessed our impact on the electricity invoice (retail of electricity, taxes, charges and levies, grid fees) of an average household in the Netherlands and in Germany, our share in Germany was around 10.8% in 2024 (2023: 4.3%). The impact of the electricity bill on households in the Netherlands is estimated to be approximately 22.7% in 2024 (2023: 8.7%). The share in Germany is increased compared to 2023, mainly due to the in 2023 obtained federal grant to reduce the grid fees which is not applicable to 2024. In the Netherlands the share increased as our costs roughly doubled, while retail costs of electricity were lower in 2024 due to decreasing wholesale prices and the taxes were also lower in 2024.

What could prevent us from reaching our goals?

To realise the energy transition, TenneT's investments are growing year-on-year. In the short to medium-term, our financing needs will remain high. As such, the financial health of TenneT and the continued progress of the energy transition relies on our ability to attract financing to realise our investments. It is essential that we continue to raise additional equity, while keeping our credit rating stable.

In this regard, the decision by the Federal Government of Germany to end negotiations concerning the envisaged sale of TenneT's German operations, was an important event in 2024. It has created a need to find alternative structural funding solutions for TenneT's German activities. As the Dutch government has said it does not want to use Dutch taxpayers' money for grid investments in Germany, TenneT must meet TenneT Germany's capital requirements either through the potential investment in TenneT Germany by private investors, or by a potential listing of TenneT Germany to raise equity in the public capital markets. Preparing for such an Initial Public Offering is a resource and time-consuming undertaking that can involve some risks for TenneT, regarding the necessary intensive preparation and execution, while balancing business continuity.

Another important challenge facing TenneT from a financial point of view is rising operating costs, due to external factors such as inflation and market scarcities. Operating cost is growing faster than foreseen for the current regulatory period as a result of the large growth of TenneT. Operating expenses exceeding the regulatory reimbursement of our operating costs will result in a lower EBIT.

Furthermore, two risk factors were identified regarding the regulatory environment. First risk factor is a too low return on equity (RoE) rate on infrastructure investments in Germany, jeopardising the implementation speed of the further energy transition. The second risk factor is related to the announced changes to the regulatory system in Germany by BNetzA. These developments are de facto creating regulatory risk in the meaning of not having a stable and reliable regulatory framework in the long-term, which is important for our investors.

Tobias Goldschmidt, Minister for Energy Transition, Climate Protection, Environment and Nature, State of Schleswig-Holstein

"There's good cooperation based on innovation."

As the most northern German state, bordering the North Sea and Baltic Sea, Schleswig-Holstein is at the forefront of Germany's energy transition. Not only is it an important landing point for offshore wind, it also produces 8.5 GW of its own onshore wind energy. As a net exporter of green energy, it plays a key role in distributing green energy to other regions in Germany and elsewhere in Europe.

With responsibilities including the state's energy transition agenda, Minister Goldschmidt says: 'We work closely with TenneT as a key partner. On the one hand they provide large parts of the critical infrastructure we need to transport electricity, and on the other they are a partner for developing our own energy policy. We have always had a good and fruitful exchange on the questions of power grid planning and the electricity market design.

Schleswig-Holstein's partnership with TenneT began around 2010, when AC grid connections linking Germany to Denmark were reinforced or newly planned and the first DC sea-cable interconnector with Norway was initiated, followed by the first DC connection to southern Germany. "These were the first of many projects that have seen our state and TenneT cooperate very closely. Schleswig-Holstein is pioneering Germany's green energy transition with TenneT's partnership," says the Minister.

He says the need for green electricity is strongly recognised in Schleswig-Holstein: "Climate change is clearly affecting us. We have already suffered severe floods and will face more in the future. So, people here know we must fight the climate crisis and understand that expanding the grid is essential for the energy transition. However, we know this public support has to be earned every day. In that respect, TenneT has learned a lot. They are accessible, engage in public dialogues and listen to people."

The Minister says TenneT is open to changing its approach to find solutions. ''It was one of the first TSOs to install protective bird markers on high-voltage lines to reduce bird collisions, for example, and in some circumstances TenneT agreed to use underground cables rather than overhead lines. In these cases, there's good cooperation based on innovation."

Although TenneT is a valued partner, the Minister says there's always room for improvement. "In Schleswig-Holstein, we are very dynamic in building up renewables. TenneT is a big organisation, so it's important they also move fast and don't lose momentum. Teamwork is key, and together we're on a good track to speed up the building of the grid."

"Schleswig-Holstein is pioneering Germany's green energy transition with TenneT's partnership."

Speed is critical for Schleswig-Holstein as it aims to be climate neutral five years ahead of Germany's national target of 2045. As the Minister says: "We know 2040 is very ambitious, so the work of TenneT and other TSOs will have a big impact on whether we reach our goals or not."

Looking ahead, the Minister sees four key challenges: "We have to accelerate the creation of renewable energies, minimise conflicts that hinder the expansion of the grid, change the energy market, and allow industry to transition in a way that keeps them here. We will only resolve these challenges with co-operation, between infrastructure, energy, politics and industry. There's no alternative if we want to be successful."

Huib van Essen, Dutch Councillor responsible for Spatial Planning and the Environment, Energy and Climate (Province of Utrecht)

"TenneT and local authorities need each other."

At 155,400 hectares, Utrecht is one of the smallest provinces in the Netherlands. However, with 26 municipalities and a population of 1.36 million, it is also one of the country's most densely populated regions. As a result, Utrecht's electricity grid is congested – an issue that TenneT works closely with local government authorities to address as part of a wider range of strategic projects focusing on the energy transition.

The Province of Utrecht is one of the key regional stakeholders that TenneT partners with to plan and implement large-scale, long-term infrastructure projects. Huib van Essen serves on the Provincial Executive for the Province of Utrecht and is responsible for the portfolio Spatial Planning and the Environment, Energy and Climate.

Huib says that TenneT and local authorities need each other, as the expansion of the national power grid is a key element in the energy transition. "We must look forward but also address the needs of constituents today: the electrification of mobility, the rising energy usage in homes, needs of companies seeking grid connection, and transition to heat pumps are all creating a sense of urgency in the region."

TenneT's collaboration with the Province of Utrecht has intensified in recent years, which Huib credits to their joint involvement in regional Energy Boards. These provide a forum for parties to align on long-term plans and joint projects, working together to identify challenges and find solutions. He says that P-MIEK, or the Provincial Multiple Year Infrastructure Programme for Energy and Climate, is one of the best examples of how the Province works with TenneT, and other stakeholders, to map out the region's future energy needs.

In 2024, the Province, TenneT, and local DSO Stedin worked together to introduce an unconventional measure for grid shortages: temporary power generators. Huib says initiatives like this help to boost people's awareness of energy consumption.

"If we don't take additional measures, blackouts could become commonplace in the next few years. Rising electricity usage, especially among households, poses a risk. We need to find ways to use the available capacity better and lower peak levels," he explains.

Reflecting on areas for improvement, Huib says TenneT is still growing into its role as a network 'developer'. "I see TenneT moving from its historical role as a network operator into the driver's seat as a developer. This means moving from a technical to a societal company, asking what does grid expansion mean for the people, companies and communities impacted by the construction, for example. Good community engagement is becoming increasingly important, and I think TenneT could make this smoother in the future."

"The energy transition calls for a change in mindset – we need unconventional solutions."

By working so closely together, Huib says both the Province and TenneT are learning a lot. He says he appreciates TenneT's openness and thinks the answer to many of the challenges both partners face lies in thinking beyond the existing regulatory constraints. "Too often the first reaction is, oh that's impossible. In a crisis however we must think beyond how we've always done things. It's a tough message to deliver to communities, but at the end of the day the energy transition calls for a change in mindset – we need unconventional solutions."

Risk management

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Corporate risk management and internal control

Corporate risk management and internal control

TenneT has implemented a holistic and integrated risk management system designed to ensure the future achievement of the company's objectives through the early identification, assessment and management of risks.

Risk management continuously identifies risks, assesses severity of risks, prioritises risks, implements risk responses and maintains a portfolio view. The identified uncertainties, opportunities or control issues are proactively reported on a quarterly basis towards the Executive Board, Audit, Risk & Compliance Committee and Senior Leadership Team. The principles of risk management and internal control are taken into account in all activities performed at and for TenneT.

Risk management and internal control framework

TenneT's enterprise risk management and internal control framework are based on the ISO 31000 Risk Management standard, the COSO II Enterprise Risk Management standard and the German auditing standard IDW PS 340 n.F, and are compliant with the requirements of applicable laws and regulations, such as the Dutch Corporate Governance Code, the German Control and Transparency in Business Act and the German Accounting Law Reform Act.

Risk management

Risk management facilitates quarterly top-down and bottom-up risk dialogues, workshops, detailed analyses and general trainings on risk awareness at all levels within TenneT. The outcome provides management insights to take risk-based decisions that support the achievement of objectives set at all organisational levels.

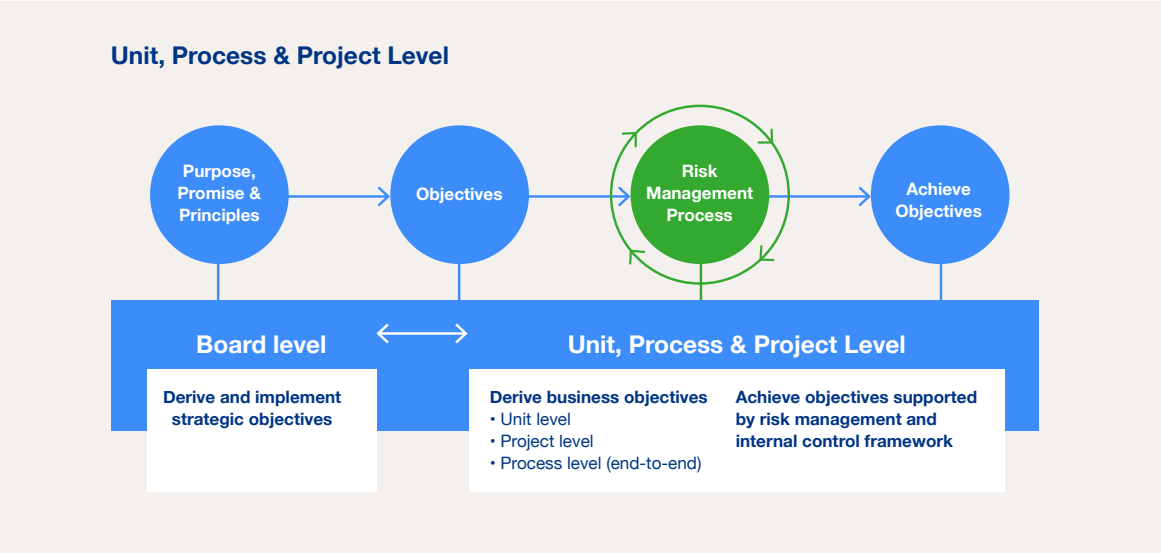
At risk management the focus and key objectives are to:

- Create and preserve the value, assets and reputation of the company;
- Promote a level of risk-taking that is socially, environmentally and legally responsible, acceptable to the public and economically sustainable;
- Comply with legal and regulatory requirements and the company's rules and values.

TenneT's risk framework is structured into:

- Enterprise Risk Management (ERM);
- Operational Risk Management (ORM), including safety risk management and security risk management;
- Project Risk Management (PRM);
- Internal Control and Process Risk Management.

TenneT regularly optimises its risk management and internal control systems as part of its continuous monitoring and improvement process. In this process, TenneT takes into account both internal and external requirements. In this context, TenneT further improved its risk management system to meet all the requirements of the German auditing standard IDW PS 340 (risk early warning system) and introduced a new risk tool.



Internal Control System

TenneT's Internal Control System (ICS) comprises controls and monitoring activities to ensure the effectiveness and efficiency of business processes, correct accounting and compliance with laws and regulations. The ICS is based on a set of monitoring measures and control activities that is

integrated in processes and organisational structures aiming to ensure the accuracy of external financial and non-financial reporting. The ICS covers all relevant business processes and also includes controls beyond the accounting process.

A standardised, structured control self-assessment process, which is carried out twice a year, includes statements on the adequacy and effectiveness of the ICS for what TenneT considers to be significant business processes. This self-assessment process is continuously reviewed and adjusted for efficiency and effectiveness. However, the effectiveness and reliability of the ICS can be limited by discretionary decisions, criminal acts, control failures or other circumstances.

The sustainability reporting process follows a similar risk management and internal control process as any other process in the organisation: once the process is defined, it is subjected to a process risk analysis. These risks are assessed both qualitatively and quantitatively. Based on the risk appetite for the area or process, the key risks are addressed through measures or key controls. Key controls are subject to the company's regular internal control assessment, review and reporting process.

Currently, the sustainability reporting process follows the internal and external reporting procedures, from the registration of events or transactions through data collection to consolidation and reporting to internal and external stakeholders. During this process, the data and information also undergoes several analyses and verification steps. These are not specific checks on sustainability information, but general checkpoints in the process to verify the appropriateness and accuracy of the information provided. The effectiveness of these high-level controls is not formally tracked or reported.

The level of sustainability reporting processes and controls is not mature yet, therefore measures have been developed to ensure the completeness and integrity of data, the accuracy of estimations, the availability of value chain data and the timeliness of information.

Risk appetite

Risk appetite

Risk appetite is the amount of risk TenneT is willing to seek or accept in pursuit of its long-term objectives.

The Risk Appetite Statement 2024 sets the guidance and willingness regarding the risk appetite for the activities conducted by TenneT in pursuit of its strategic objectives. The Executive Board together with the Senior Leadership Team reviews the Risk Appetite Statement annually to ensure that TenneT maintains a balance between risk and reward, relative to potential opportunities. In terms of the amount of risk that TenneT is willing to seek or accept, a differentiation is made between high, medium and low risk appetite.

High Risk Appetite:

Areas in which we have a preference for disciplined risk-taking, because we have determined that the potential upsides and benefits outweigh the potential disadvantages.

Medium Risk Appetite:

Areas in which TenneT must constantly strike a balance between potential upsides and benefits and potential downside aspects.

Low Risk Appetite:

Areas in which we avoid risks or act to minimise or eliminate the likelihood that risks will occur, because we have determined that the potential downside aspects are intolerable. These are areas in which we typically seek to maintain a very strong control environment.

In the sections hereafter we have placed each risk area on a risk-appetite scale that ranges from 'high' to 'medium' to 'low':

High risk appetite

Risk area	Risk appetite statement	Risks that we are willing to take	Risks that we are not willing to take
Customer Connections	We strive to connect our customers to our grid in a timely manner as required legally and regulatory. TenneT is forced to make decisions in areas where capacity constraints arise for which we try to find non-linear solutions and innovations.	Build substations or transformers without a contract in place (risking stranded assets) when it is an appropriate greenfield location, has a reasonable distance to our current grid and has a reasonable distance to potential new customers.	Connect customers only based on the 'first come first serve' principle.
		To take a justifiable risk by signing time-based connection and transmission agreements.	Pursue customer connection projects that could jeopardise the safety and security of supply beyond static or dynamic system limits.
		Invest in partners who are either start-ups or have a start-up mentality.	Act against rules, laws or regulatory decisions.
			Overpromise to our stakeholders.
Project execution	We use non-linear solutions to design, build and deliver our large projects, but also realise that in some occurrences decisions need to be made in favour of budget, quality or time.	To take reasonable entrepreneurial decisions to anticipate future decisions by regulators.	Continuing with a project that is significantly over budget or time, without a clear strategy to reduce costs or without a clear way forward.
		To be pragmatic in designing assets, implement project and asset standardisation and lean project staffing.	Project budget overruns for the sake of being faster in project delivery.
		Decision making based on cost control affecting project requirements.	Unnecessary project scope changes after investment approvals.
		Proactive project planning by acquisition of planned equipment or land.	Lower quality standards if it negatively affects safety or security of supply.
		Transfer more project responsibility to our partners.	

Risk area	Risk appetite statement	Risks that we are willing to take	Risks that we are not willing to take
Adaptation of new Technology	To prepare TenneT for the future, with 'Target Grid 2045' or the 'Control Room Of the Future', we are willing to make use of technology or software that is either new to the industry or to use current technology in a different manner, provided that it does not jeopardise safety and the security of supply society expects from us.	Usage of new technologies that could fail or require more investments than anticipated to fulfil on their promise.	Implement business critical new technology, without being in full control or without having a full fallback solution in place.
		Piloting new technologies with less proven security protocols in a sandboxed environment to provide faster solutions and a quicker implementation.	Usage of technology that could jeopardise data protection or cyber security.
		Adopt standardisation for non-unique processes and pursue zero customisation.	Let the fear or unwillingness of people to use new technology dictate the strategy.
		Apply new technology that is new to TenneT but not to the industry.	Adapt new technology that would immediately stop and change our current projects.

Medium risk appetite

Risk area	Risk appetite statement	Risks that we are willing to take	Risks that we are not willing to take
Security of Supply	We ensure the security of supply with grid availability above 99% by taking into account high-voltage line capacities, availability of interconnected electricity, dispatching and the integration of maintenance planning. We are willing to enter into innovative partnerships and apply cutting-edge technology to secure supply today and tomorrow.	Facilitate flexibility in operational processes such as co-operation in the GOPACS platform (Grid Operators Platform for AnCillary Services) for congestion management.	Facilitate outages, brownouts, blackouts or any operational situation that may cause a supply disruption.
		Replacement of the end-of-life SCADA (Supervisory Control and Data Acquisition) system.	Cloud implementation for mission critical systems or applications.
		Risk based maintenance activities.	An 'N-0' redundancy for residential connections.
Financial Health	We maintain at least an A3/A- credit rating.	Spatial conditions require us to take additional risk on costs, for instance for GIS installations or underground cabling.	Pursue lower costs that would have a significant negative effect on the security of supply.
		Higher expenditures if it justifies an operational gain in quality, safety or to adhere to binding deadlines.	A credit rating that is insufficient to raise the necessary financing to finance our CapEx programme.
		Accept that in some cases expenditures are made without the guarantee that some or all of the costs are reimbursed by the regulatory framework or paid for by customers.	Decisions that would impinge financial policies and directives.
		A budget overrun today if it would result in future cost reduction, secure corporate governance or fostering of innovative topics.	Accepting any price to speed up project delivery.
Affordability	TenneT is dedicated to ensure transmission of electricity remains affordable for all customers, businesses and regulators, but also realises that we need to balance affordability with the need for reliable and sustainable energy transmission. We prioritise cost-efficient operations and investments to maintain affordability without compromising the quality and reliability of our services, adhere to regulatory requirements and invest in innovative technologies that enhance operational efficiency and reduce costs in the long-term.	Invest more today in infrastructure by taking a risk on stranded assets if it would benefit society tomorrow in cost or secure supply.	Uncontrolled project costs or unlimited spending without proper reasoning.
			Cost reduction if it would negatively affect the strategy and requirements of 'Target Grid 2045' or our green target ambition.
			Act against regulations, policies and laws (e.g. 'Bundesbedarfsplangesetz').

Risk area	Risk appetite statement	Risks that we are willing to take	Risks that we are not willing to take
			Accept new projects that we cannot deliver on time due to market or operational constraints or if it would negatively affect our predictability towards the market, stakeholders and society.
Attraction and retention of personnel	We will continually assess best practices in the industry for attracting, retaining and developing talent, including seeking flexibilities for hiring and compensating staff, while recognising that growing too rapidly could inhibit the organisation's agility and responsiveness.	A disciplined view on how employees work more effective and driven based on performance.	To hire new employees without the necessary qualification or security check, as this can lead to significant operational risks.
		Hire employees based on soft skills, if hard skills are not present but trainable.	To attract and retain employees at any cost.
		Utilise more of the legal possibilities (probation period, home office rules, hiring in different locations or countries).	To create a knowledge drain within the organisation by leaning too heavily on externals or contractors for a longer period of time.
		Reassess benefits and rewards based on performance, role and position of an employee.	
Environmental, Social and Governance (ESG)	We take our responsibility of our impact on ESG seriously. We align our ESG initiatives with our core values and strategic objectives, contributing to long-term sustainability and societal value. We commit to continuous improvement in our ESG practices, actively engage with all our stakeholders and suppliers about ESG performance, impact and commitment, operate with a strong governance structure in place and are transparent about our ESG performance.	Accept and be transparent that we cannot fully achieve and close the CSRD gaps this year (2024).	Not being able to comply with ESG legislation without a proper explanation and justification.
		The impact we have on nature as this is required to build the Target Grid, but we compensate for it where and if possible.	To lower our green target and ambition.
		Continue to use SF_6 gas in insulators for stations where there is no suitable alternative available.	To compromise on socially acceptable behaviour, compliancy or human rights.
Suppliers & Supplies	We will make reasonable efforts to invest in supplier relationships and to secure critical supplies and services on time and in agreed quality for large projects while balancing supply chain constraints due to overall tight market conditions.	To choose the preferred suitable solution via tender over the lowest cost option.	Dependency on one key supplier for critical components.
		Dependency on framework contracts to stimulate capacity growth at the supplier's side.	Purchasing from suppliers or countries that are blacklisted, such as Russia or Belarus.
		To buy assets based on a grouped portfolio level, not only per project.	Accept contractors who are not capable or not able to demonstrate capability of manufacturing the resources for the sake of speeding up projects or cost reduction.
		Balance and to make choices in capacity, affordability, quality, reliability and responsibility.	Pay suppliers without having securities or payment instalments in place.
		Reduced scrutiny of new suppliers when it is a well-known positive supplier that operates on a much bigger scale than TenneT.	

Low risk appetite

Risk area	Risk appetite statement	Risks that we are willing to take	Risks that we are not willing to take
Health and Safety	Everyone working for TenneT at one of our offices, at onshore or offshore locations or in the field, return home safe in good health each and every day. We take reasonable measures to prevent operational instability throughout the lifecycle of facilities by maintenance, inspection and anti-corrosion programmes and by seeking improvements in process and equipment reliability.	Proactive attitude (instead of reactive) by implementing new guidelines and procedures to improve the safety culture.	Build or maintain our assets at the cost of safety without a clear operational health and safety plan.
		Slightly increased work pressure if it can be balanced with a recovery period.	Pursue dangerous situations that could lead to loss of life or cause severe injuries.
		Prolong assets and equipment beyond expected or designed lifetimes to prioritise building new assets.	Overload employees beyond reasonable limits affecting psychological health.
			Accept suppliers without a safety culture level certificate or with a certificate less than level 3.
Cyber Security and Physical attacks	We continually assess best practices and resilience to control the risk of physical threats and to protect our assets from theft, physical attacks and intruders, while recognising that a 100% protection is not possible.	We cannot physically protect all of our assets, such as pylons, for a full 100%, but we remain resilient and alert to all possible threats.	Allow unauthorised or non-registered personnel at our sites or offices.
	We take a very cautious approach to cyber risk, reducing risks as much as possible by proactively and continuously mitigating malware and other intrusions, preventing unauthorised disclosure of sensitive data and mitigating vulnerabilities in our security protocols.	Implement general, reasonable or new security measures on IT or OT adapted to the threat level.	Usage of inbuild intelligence, either hardware or software, that could impose a (national) security risk.
			Any cyber risks that would lead to an assessment higher than extremely low.
			Accepting any deviation from international standards affecting cyber security.

Key risks and opportunities

Key risks and opportunities

The following sections provide a structured risk overview of key risks and opportunities identified by TenneT:

- Identified corporate risks (strategic, financial and operational), linked to the focus areas of our strategy
- Identified regulatory risks
- Identified climate-related risks (transition and physical) and opportunities

Please note that the risks described in these tables are also presented earlier in the paragraphs 'What could prevent us from reaching our goals?' in section 'Our Performance 2024'.

Corporate risks

Each quarter risk management conducts risk dialogues with all risk reporting units and has identified the following risks that could potentially have an impact on our short or long-term strategy. These risks are mapped as either strategic, financial or operational risks. Furthermore, each risk is linked to a focus area of our strategy.

Strategic risks

Risk	Description	Mitigating actions	Strategy		
Lower public or political acceptance	The risk of losing social, political or general stakeholder engagement, if for instance TenneT fails to uphold expectations regarding the affordability of the electricity grid or the security of supply.	• Regular media assessment, reporting on reputation status and impact analysis.			Deliver together (for customers)
Changes in law, legislation or regulation	Changed (interpretation of) legislation or regulation could delay our large projects, affect our daily operational tasks or increase costs if for instance it would affect the regulatory reimbursement.	• Tool-based monitoring and automated reception of information on legal changes.	Build the grid faster	Utilise the grid better	
Organisational restructuring	As TenneT split the organisation into two country-specific TSOs, the organisational changes may result in a temporary lack of organisational alignment or working according to a well-defined end-to-end process model, which could impact our short-term results.	• Change management project to prepare and execute the functional blueprints to ensure both TSO are properly set-up after disentanglement. • A transitional service agreement (TSA) to ensure business continuity due to cross-border setup and unbalanced expertise and knowledge.			Deliver together (for customers)
Delay in delivering on our strategic plan	The energy transition is in full swing and political ambitions are high. Failure to deliver on time on our strategic goals, such as Target Grid 2045, could raise questions about our license to operate or affect affordability for society.	• Implementation of the revised and sharpened strategy. • Business Acceleration Team to support business in accelerating strategy execution with focus on results and making choices.	Build the grid faster		
Changing grid planning requirements and assumptions	Uncertainties in assumptions or errors in grid planning could lead to inadequate grid extension projects, incorrect capacity assumptions or planned assets not able to be used due to technological constraints.	• Perform a study outlining Target Grid 2045 and exchange our market data and CGMES-compliant (Common Grid Model Exchange Standard) grid model with other TSOs to be used for European grid planning studies. • Horizon (interOPERA)bility project: standardisation of converters for multi-vendor solutions under involvement of European vendors. • An offshore DC overlay topology (NL&GE) is established.	Build the grid faster		

Financial risks

Risk	Description	Mitigating actions	Strategy		
Suppliers' market risk	In a market characterised by inflation, price fluctuations and a strong seller's market, the increase in supply required by TenneT and other TSOs due to the energy transition exposes TenneT to situations of abuse of market position, disproportionate cost increases or budget overruns.	• Establish supplier relationship management, partnership agreements and framework contracts. • Setup of index-based price adjustment clauses in contracts to reflect market developments.	Build the grid faster	Utilise the grid better	
Cost overruns	External factors such as inflation and market scarcities as well as internal factors such as organisational changes and inefficiencies could induce a rise of operating cost, resulting into budget plan exceedance or a lower score in OpEx benchmarks by regulators.	• Cost conscious behaviour, measuring our objectives and continuous measurement of performance. • Implementation plan for deficit reduction measures per unit.			Deliver together (for customers)
Lack of investor(s)	Due to market conditions, federal elections or political changes, we are not able to raise additional equity from investors in a timely manner, which is necessary to finance major projects while maintaining a stable credit rating.	• In alignment with its shareholder TenneT is exploring and preparing for an alternative way to finance TenneT Germany. This alternative focuses on attracting third party investors at the level of TenneT Germany. • TenneT and the Dutch state have in January 2024 agreed upon a shareholder loan facility of EUR 25 billion to safeguard the financing of TenneT's planned investments in the Netherlands and Germany for 2024 and 2025. In February 2025, TenneT and the Dutch state have agreed upon a supplementary shareholder loan facility of EUR 19.4 billion, safeguarding TenneT's planned investments in the Netherlands and Germany for 2025 and 2026. • New green hybrid bond is issued in 2024.	Build the grid faster		
Lower credit rating or change in outlook	A lower credit rating or a change in the outlook could affect TenneT's ability to raise adequate financing to fund the investment portfolio and maintain adequate liquidity. It could lead to postponed investment projects as well as higher financing costs.	• Close alignment with shareholder on shareholder loan facility for forthcoming years. • Align with our regulators to establish a regulatory framework that supports our strategy and by delivering a return in line with what capital providers expect.	Build the grid faster		

Operational risks

Risk	Description	Mitigating actions	Strategy		
Cyber Security and Physical attacks	As operator of critical infrastructure TenneT needs to protect and secure its network and assets against any major cyber or physical attack. An exploitation of a technical vulnerability in our IT/OT systems caused by malicious software or by a deliberate network intrusion or a deliberate attack on our assets such as on our onshore substations, offshore platforms or undersea cables, could potentially result into disrupting business operations, affect reliable electricity transmission or loss of grid oversight in control rooms if TenneT is not sufficiently resilient to secure a timely backup.	• Maintain Information Security Management System (ISMS) based on ISO 27001. • Collaboration and information sharing with authorities. • Continuation of effective monitoring and action-taking against physical or cyber security attacks, together with our strategic partners.		Utilise the grid better	
Unavailability of resources and retention	TenneT may face market challenges in recruiting new employees due to tight labour market conditions combined with an ageing workforce and internal staff turnover. The need for additional employees as a result of the split into two national TSOs could further exacerbate the overall situation.	• Strategic workforce management. • Using a competency-based approach for all new hires.	Build the grid faster		Deliver together (for customers)
Fraudulent activities	Inherent to our fast-growing company under external pressure to realise the energy transition by building large infrastructural projects, there is a risk of corruption (conflicts of interest, bribery, kickbacks and illegal gratuities), misappropriation of assets and incorrect reporting, including greenwashing.	• Performance of regular fraud risk assessments. • Periodic compliance trainings on fraud related matters. • Half-yearly corporate and unit management representation letter. • Speak-up portal in place. • Preventive and detective control measures in place, assessed half-yearly by management.			Deliver together (for customers)
Suppliers' failure	TenneT's main suppliers may not be able to deliver already contracted supplies (e.g. DC cables, transformers or platforms) or services on time or in the agreed quality and quantity. Suppliers could face capacity, geopolitical or logistical constraints, their own operational disruptions or financial difficulties. This could result in project delays or interruptions to our operations.	• Regular credit checks and use of bank guarantees. • Regular tactical and strategic supplier meetings with our top and focus suppliers. • Sourcing of backup suppliers.	Build the grid faster		
Unfulfilled demand and scarcities of products and services	A sellers' market, complex tender processes or insufficient demand planning could lead to unavailability of the required capacity of products, raw materials or services affecting our projects or interrupt our operations. This could be aggravated if multiple TSOs or DSOs are sourcing from the same supplier.	• Establish long-term partnership agreements with suppliers. • Prepare joint planning with suppliers for critical categories. • Diversification of suppliers and strategic warehousing.	Build the grid faster	Utilise the grid better	
Limitations to connecting customers	Industrial innovation and the growing demand for electrification solutions are leading to an increase in customer requests for connections. In some cases, TenneT will not be able to connect these customers to our grid in a timely manner. This could result in negative media coverage and a growing queue of waiting customers.	• New unit 'Customer Connections & Capacity' to improve overall customer connection performance. • Priority setting in portfolio with DSOs. • Developing the ConnectNow application (by example of National Grid Ventures) to reduce overall lead time with 6 months.	Build the grid faster	Utilise the grid better	

Risk	Description	Mitigating actions	Strategy		
Litigation and lawsuits	TenneT could face lawsuits that are either lost or settled, which could result into a negative financial impact for which insufficient financial provisions were recognised. Furthermore, some verdicts of lost cases could impose an additional risk that others could use the legal precedence to file lawsuits on similar grounds.	• Change from state legislation to 'arbitration proceedings' to reduce costs and cycle time of court proceedings. • Active contract and claim management.	Build the grid faster	Utilise the grid better	
Voltage control constraints	A high level of renewable energy sources or insufficient voltage control capabilities could cause over- or undershooting voltage limits. It could potentially damage or reduce the lifetime of our assets or components, lead to temporary disconnection of customers or grid interruptions.	• 'Required must run' contracts until final solution is available. • Regular monitoring on voltage. • Ongoing dialogues with all Dutch DSOs on current issues and suitable solutions.		Utilise the grid better	
Scarcity of ancillary services options	Limited availability of interconnected electricity in Europe or significant increases in traded electricity prices could result into capacity constraints or have a financial impact on the provision of ancillary services. This could increase societal costs, result into complex scheduling and dispatching or an imbalance between ancillary costs paid and ancillary costs reimbursed.	• Finalisation and implementation of 'Redispatch+' project. • Implementation of the roadmap 'system stability and powerplant strategy'.		Utilise the grid better	
Psycho-social risk	TenneT's ambition to deliver for society on the climate ambition is intense and the situation could arise that employees are feeling a higher work pressure to deliver. This could affect our employees' resilience and ability to balance their daily work-life hours, which could result into decreased health and overall happiness or long-term absence.	• Develop to safety culture ladder 4 (incl. psycho-social safety). • Regular leaders training. • Trusted persons and advisors available as contact persons for employees.			Deliver together (for customers)
Data breach of privacy data	Theft or loss of personal information or data by staff, contractors or third parties due to weaknesses in software or applications, not following up on data privacy policies, security requirements or measures.	• Maintenance of a privacy management system. • Data privacy champions for each unit. • Periodic trainings and e-learnings.			Deliver together (for customers)
Non-compliance with laws and regulation	Compliance risk resulting from unintentional or deliberate failure to act in accordance with (industry) laws and regulations or internal policies, e.g. antitrust or bribery cases by our contractors or partners in countries with lower governance standards. For reporting reference is made to the next item.	• Usage of legal register software. • Maintaining a compliance system. • Yearly compliance dialogues with all unit directors. • Code of Conduct and Supplier Code of Conduct. • TenneT Legal Academy, including trainings on tender and construction law. • E-learnings in relation to compliance, corruption and REMIT (Regulation on wholesale Energy Market Integrity and Transparency).			Deliver together (for customers)

Risk	Description	Mitigating actions	Strategy		
Reporting	TenneT is subject to a variety of laws and regulations related to reporting. Despite our efforts and pro-active approach, complex accounting, significant estimates and assumptions and deviations from the common reporting processes and related or missing controls could impair the accuracy of financial and non-financial reporting. Please refer for more details regarding subjectivity in estimates to note 1 of the consolidated financial statements.	• CSRD readiness project. • Continuous development of internal control framework, including control self-assessment. • Group Accounting Manual. • Trainings covering relevant reporting developments and requirements.			Deliver together (for customers)
Major project delays	A major delay of large projects' delivery due to delayed permitting procedures, scope changes, sourcing issues or lacking technical personnel resources could lead to higher project costs, penalty payments, negative media coverage or redispatch costs.	• Standardised engineering and sourcing concepts, such as 2GW platforms. • Early initiation and parallel start of project phases. • Regular exchange meetings with regulators, ministries and other TSOs to discuss acceleration possibilities.	Build the grid faster		
Environmental incidents	The construction and maintenance of some of our facilities could result in environmental incidents, such as loss of containment of hazardous substances (e.g. oil, SF_6, other gases or liquids). In addition, the transition to a low carbon economy will require changes in legislation, regulation and policy, technology and market changes that could result in higher societal costs.	• Implementation of HSE management system (based on ISO 45001). • Firm emission reduction goals for 2030. • Environmental Cost Indicator (ECI) to incentivise our suppliers to reduce the environmental impact of the products and services we procure.		Utilise the grid better	
Major industrial or occupational accident	Safety incidents and major occupational accidents (e.g. fire, explosion, helicopter crash, vessel collision, structural failure or release of toxic substances) could occur, resulting in severe asset damage and multiple fatalities or result into a significant impact on the environment or on our reputation.	• Implementation of the programme 'Safety needs our energy'. • Implementation of HSE management system (based on ISO 45001). • Embedding our safety requirements into our contracts, with follow-up meetings to ensure compliance.	Build the grid faster		Deliver together (for customers)
Severe infrastructure failure	A serious system interruption or unavailability leading to power outages due to technical failure, inadequate, delayed or non-executed maintenance or non-compliance with operating procedures by TenneT, contractors or third parties.	• Implementation of risk based maintenance scoping. • Standardisation of equipment and assets to accelerate the speed and efficiency of maintenance. • Introduction of a new 'Outage Window Optimisation' project to increase capabilities for maintenance in the grid.		Utilise the grid better	

Regulatory risks

Area	Regulatory risk	Mitigating actions
General	The grid fees have increased significantly (mainly due to high energy prices in terms of ancillary services) and will further increase due to the investments needed to facilitate the energy transition.	• TenneT aims to address the affordability issue by 1) being transparent on the financial implications of the current plans to the relevant stakeholders, 2) ensuring efficient roll-out strategies of assets (i.e. offshore 2GW Program, hybrid assets), 3) working on efficient ancillary services markets, and 4) limit the operational expenses.
	Inability to meet increasing efficiency targets over time as imposed by incentive regulation, especially considering a strongly growing company and the need for significant investments in grid expansion, maintenance, operation as well as innovation.	• TenneT performs regular reviews of its processes and organisational structure, introduced lean management and carries out continuous improvement activities. TenneT also prepares make-or-buy decisions in its investment process to optimise value for money to society and conducts strategic dialogues with regulators (ACM, BNetzA, ACER), policymakers and industry partners and suppliers to co-shape its future regulatory framework.
	Undercoverage of the regulatory CapEx remuneration driven by a non-reasonable return on invested capital and an increasing investment portfolio which could lead to more difficulties in financing and raising sufficient funding.	• TenneT's strategy is to seek mutually acceptable results with the regulator and other stakeholders. However, if needed to protect pivotal strategic positions on solid legal grounds, legal action may be taken.
	Non-compliance with the current regulatory framework. New regulatory and legal obligations have to be implemented. The flow of information on new regulatory and legal requirements must be ensured.	• Onboarding of new employees on relevant topics.
Europe	The 'Clean Energy Package' entered into force. It requires amongst others that TSOs provide 70% of the total cross-border transmission capacity to the market, an amount difficult to achieve without extensive and costly redispatch activities. The German government introduced an action plan to gradually achieve this target by 31 December 2025. Delays in fulfilment of this plan by TenneT could lead to material financial penalties. Similarly, the Dutch Ministry of Climate and Green Growth has issued an action plan to gradually achieve the 70% target by 1 January 2026, which also contains derogations for TenneT.	• In Germany TenneT keeps the capacity requirements along the 'trajectory' as defined in the national 'action plan'. This means stepping up to full 70% using instruments such as coordinated redispatch and countertrade. • In the Netherlands, TenneT monitors compliance with the action plan, with regard to the conditions of the derogation. TenneT reports on issues to the ACM and the Ministry of Climate and Green Growth, if any.
The Netherlands	ACM has performed a consultation for the new regulatory period starting in 2027. ACM intends to revise the regulatory method to better account for the implications of the energy transition. The efficiency assessment and future estimations of the OpEx development remain challenging topics.	• TenneT appreciates the open vision ACM has taken towards the new regulatory period and will support the process by preparing consultation responses that include implementable regulatory improvements to the current challenges. In the consultation process TenneT will address its main concerns with the current method being: 1) regulation of operational & IT expenditure 2) the use of the international TSO benchmark which does not provide sufficiently robust efficiency incentives 3) regulation of innovations.
	Increasing congestion in the TenneT grid puts pressure on TenneT to open up any remaining grid capacity and propose regulatory changes if needed.	• TenneT asserted a pro-active role within the national action plan on grid congestion and develops new options in co-operation with stakeholders. Early results are a proposed implementation of time-of-use tariffs and time dependent transmission rights.
Germany	Due to the rise of the financing costs on the capital markets since 2022, the BNetzA will adjust the return on equity (RoE) annually in the 4th regulatory period compared to the initial determination of 5.07% (before corporate tax). However, adjustments are only granted for parts of TenneT's new investments from 2024. The RoE of 5.07% will be applied to the remaining investments.	• In order to ensure an appropriate return on equity for all investments in line with the current capital market, TenneT, together with the other TSOs, has filed an action against the BNetzA's determination with the Düsseldorf Higher Regional Court. However, a judgement is expected in 2025 at the earliest.

Area	Regulatory risk	Mitigating actions
	The energy industry act was changed in 2023 to give more decision-making power to the BNetzA. The previously relevant legal ordinances, will remain in force for a transitional period until the end of 2028. However, the BNetzA can already deviate from these. BNetzA drafted several key element papers on the future regulatory framework and held dialogue workshops with the grid operators. However, in 2024 BNetzA focused on DSOs and the gas sector. Nevertheless, these processes give first indications for BNetzA's ideas for the TSOs.	• TenneT monitors intensively all BNetzA communication regarding the future regulatory framework and actively participates in public and expert discussions. TenneT's goal is to positions itself as a competent partner and trustful advisor to the regulators and policymakers.

Climate-related risks and opportunities

The Task Force on Climate-Related Financial Disclosures provides recommendations for companies to improve the reporting of climate-related financial information. We have followed up on its recommendations by including climate-related topics in our risk assessment process and have identified the following climate-related risks and opportunities, which we clustered hereafter. Please note that there might be some overlap with risks also being mentioned earlier in this report, but this is to provide one structured overview in this section.

Transition risks

Risk	Description	Mitigating actions
Policy and legal	Policy and legal risks are related to our regulatory framework. TenneT could be faced by unexpected but immediate changes in laws and regulations on for instance reporting requirements, regulatory changes or usage of f-gas and PFAS.	• We mitigate this risk by lobbying on national and European level. • Run pilot projects and focus on those topics that promise the highest benefit for society.
Technology	Limitations in technological developments could reduce TenneT's ability to source greener technology, products or materials required to implement effective measures to mitigate greenhouse gas emissions. This could create an increased reliance on outdated technologies that are unsustainable.	• Actively invest in new technology as part of our strategy that contributes to reducing our environmental impact. We also challenge the necessity of each investment and embrace other solutions, if those promise more societal value.
Market	Market risk relates to the higher infeed of energy from renewable sources, which impacts how we balance our grid. Renewable energy sources are more volatile and cannot easily be increased in case of a higher demand. In such situations additional measures are required to balance the grid, such as redispatch.	• TenneT plans and builds DC-grid connections in Germany and interconnectors within Europe. We investigate the integration of green hydrogen and power grids as well as improving the quality of data to predict electricity production and consumption.
Reputation and community trust	A reputation risk could occur if we are unable to deliver on our strategic goal to drive the energy transition. If TenneT would thereby lose the trust of the community, for instance due to lowered affordability or living standards, this could result into the loss of trust and may affect our future financing, or result in landowners not co-operating, leading to lawsuits and delays and potentially lower the support from (local) stakeholders.	• We aim to communicate in an open and transparent fashion by inviting stakeholders in the planning and approval process of projects to voice their opinion. We also aim to balance affordability, reliability and sustainability in all our investment decisions. Further mitigation takes place through the usage of professional planning, project management and cost forecasting.
Supply chain management	In some cases there are no suitable alternatives available to replace raw materials in such extent that TenneT might still depend on environmentally harmful raw materials. For instance this is the case for the mining of rare metals, which could cause an ecological impact in countries of origin.	• We invest in new technologies, innovations and strategic partnerships to find and utilise options that have less environmental impact. We also incentivise suppliers to reduce the environmental impact of the products offered and diversify where possible.
Grid capacity	Due to the dire need for electrification, the huge demand and the limitations of the currently existing grid capacity, grid congestions arise. To alleviate the grid of these temporary bottlenecks, ramp-up using fossil and gas powered sources will be required on the short-term, thereby contributing to an increase in carbon emissions.	We mitigate this risk by working on speeding up the energy transition, accelerating speed of delivery and limiting our negative emissions through policies, such as our climate transition plans.

Physical risks

Risk	Description	Mitigating actions
Acute or unpredictable extreme weather events	Due to climate change, extreme or acute weather events such as storms, heat waves and floods could become more common. This could lead to business interruption, increased costs for emergency measures or damage to our on- or offshore assets.	• The effects of acute weather conditions are mitigated during the design, construction and maintenance of our assets, for instance by the choice of location and materials.
Chronic transitional climate changes	Persistent gradual climate change, such as rising temperatures, changing precipitation patterns or rising sea levels could cause higher salt corrosion, which can have long-term effects on TenneT's activities, costs and assets.	• We monitor climate developments to gain more experience and insights related to the scenarios and effects. TenneT insures all substations and buildings during construction and operation against risks from natural catastrophes.
Increasing temperatures and heat waves	Rising temperatures due to climate change affect the physical properties of high-voltage lines, leading to an increased risk of fire or reduced security of supply. This could affect and damage our infrastructure, but also lead to outages or induce a safety risk for society.	• The risks of rising temperatures and the effect of heat waves are mitigated during the design, construction and maintenance of our assets and by our daily grid operation.

Opportunities

Opportunities	How might this affect TenneT
Resource efficiency	Increased decentralised electricity production and storage including self-balancing micro grids as well as correctly located electrolysers, can relieve high-voltage grids. Furthermore, DC-interconnectors enhance the transmission of electricity over very long distances and connect renewable electricity production and demand in different countries.
	Solutions related to flexibility help us to make smarter use of our grid. This might have a positive effect as this could lead to less grid expansion and therefore help us reduce the amounts of resources required to secure supply today and tomorrow.
Energy source	We are a leading investor in the energy transition and so we have been able to gain a vast amount of experience connecting renewable energy sources, such as offshore wind, to our grid. This experience helps us to further drive the energy transition together with partners and fulfil the future investment portfolio.
Products and Services	Our project portfolio has significantly changed in order to meet national and European climate goals. Key projects are connecting offshore wind energy sources to our grid or ensuring that our onshore grid is prepared for a new energy future. The gathering and analysis of energy data may lead to new products and services provided by TSOs, such as Equigy.
Markets	Strategies and objectives of financial institutes and banks provide opportunities for TenneT to attract sustainable financing at favourable terms and conditions, by issuing green finance products to finance and refinance our investments in green infrastructure projects.
Resilience	Trends in society, like the electrification of mobility, result in higher demand for a stable grid and power supply. To ensure resilience, integration of electricity and gas grids is an important alternative. Digitalisation using technologies like automation, robotics and blockchain will help to optimise grid utilisation, while safeguarding a reliable supply of electricity.

Statements of the Executive Board

The Executive Board is responsible for designing and operating TenneT's risk management and internal control system, and for reviewing its effectiveness.

Statement of responsibility

The risk management and internal control system consists of the following elements:

- The enterprise risk management system aimed to identify, analyse, define mitigating measures and monitor the development of risks relevant to TenneT;
- The internal control framework aimed to manage and control critical processes, including control self-assessments to document the effectiveness of control processes;
- Business plans and quarterly reports with information on financial and non-financial objectives and their achievement;
- Internal audits of key processes and follow-up on audit findings with relevant management;
- Actions based on recommendations made in the external auditor's management letter;
- An upwardly cascading internal Letter of Representation (LOR) process, resulting in a company-wide LOR signed by the Executive Board;
- A compliance management system that enables TenneT to demonstrate its compliance with relevant laws- and regulations, industry codes and standards, as well as its commitment to good corporate governance, best practices, ethics and stakeholder expectations among others risk of internal fraud, bribery or corruption.

The Executive Board periodically reviews and analyses the strategic, operational, financial and compliance risks to which TenneT is exposed. It also regularly assesses the design and effectiveness of the risk management and internal control system. The results of these assessments are shared with the Audit, Risk & Compliance Committee, acting as a committee of the Supervisory Board, the Supervisory Board itself and the external auditor.

In view of the ongoing challenges faced by TenneT in implementing the energy transition and the complexity of the numerous organisational changes, the Executive Board strives to continuously adapt the risk priorities to current circumstances as part of a sound risk and internal control management.

The risk management and internal control system does not provide absolute assurance that all corporate objectives will be fully achieved, nor does it give full assurance that material errors, losses, fraud or violations of laws and regulations will not occur in the operational processes and/or the financial reporting.

Taking the above into account, the Executive Board is of the opinion that TenneT's risk management and internal control system provides reasonable assurance that TenneT's financial reporting does not contain any errors of material significance and that the risk management and internal control system has operated effectively in the year under review.

In control statement

We confirm that, to the best of our knowledge, the financial statements for the period 1 January to 31 December 2024 have been prepared in accordance with IFRS as adopted by the EU, and with Part 9 of Book 2 of the Dutch Civil Code; that the disclosures in the financial statements are a true and fair view of TenneT's assets, liabilities, financial position and results as a whole; and that the disclosures in the Integrated Annual Report give a true and fair view of TenneT's financial performance, results and position, together with a description of the most significant risks and uncertainties the company faces. Furthermore, we confirm that to the best of our knowledge, the Group has adequate resources to remain in operation during the next 12 months and consequently the financial statements have been prepared on a going concern basis.

Arnhem, 3 March 2025

M.J.J. van Beek

T.C. Meyerjürgens

M.C. Abbenhuis

A.C.H. Freitag

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Corporate governance structure

TenneT's corporate governance structure comprises the Executive Board, the Supervisory Board and the General Meeting of Shareholders. Additionally, our Audit, Risk & Internal Control and Compliance & Integrity unit and the external auditor play an important role in this structure.

Executive Board

The Executive Board of TenneT Holding B.V. has four statutory directors. The Executive Board members have joint authority to represent the company. Each board member also holds limited individual power of attorney. Three members of the Executive Board of TenneT Holding B.V. are managing directors of TenneT TSO B.V., three members of the Executive Board are managing directors of TenneT TSO GmbH, and one of these three members is managing director of TenneT Offshore GmbH. One member of the Executive Board is chair of the Aufsichtsrat of TenneT TSO GmbH.

The Executive Board is responsible for sustainable long-term value creation by the company, which includes regulated and non-regulated activities.

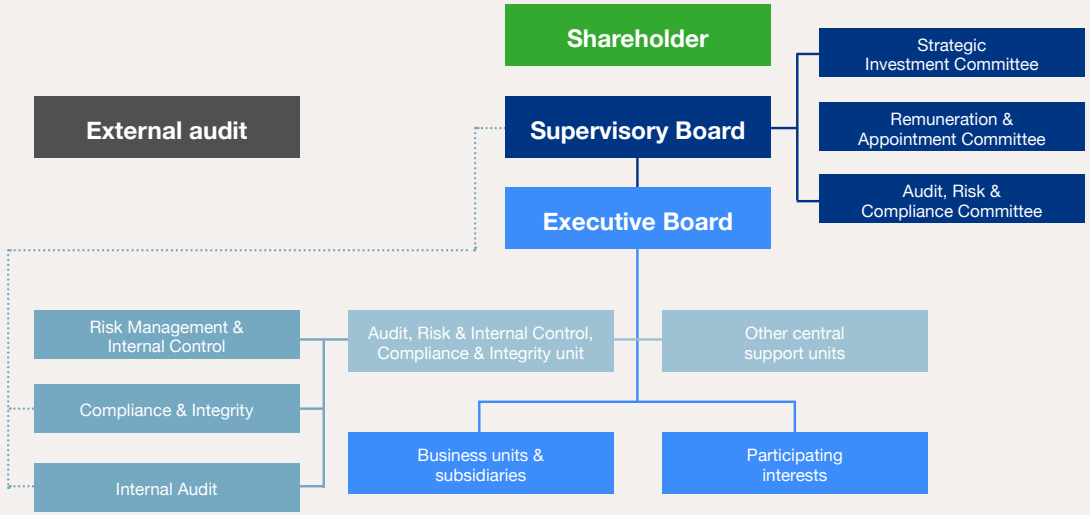
Further information about the Executive Board (such as its rules and rotation schedule) is available on our corporate website.

Supervisory Board

The Supervisory Board of TenneT Holding B.V. supervises the policies, management and the general affairs. It carries out its duties in the interests of the company and its stakeholders, and takes into account the effectiveness of the company's internal risk management and control systems and the integrity and quality of the financial and sustainability reporting. Supervisory Board decision-making is supported by the Strategic Investment Committee, the Audit, Risk and Compliance Committee and the Remuneration and Appointments Committee. The temporary Supervisory Baord Ampere Committee, established in 2023, remained in function in the first half year of 2024. It continued in the second half year as the Voltura Committee after the negotiations with the German government about a full sale of TenneT Germany were terminated. This committee prepares decisions on project Voltura (attracting third party investors on the level of TenneT Germany) and project Samba (two independent organisations within one TenneT group). TenneT has a two-tier board structure, as specified in the Electricity Act.

Further information about the Supervisory Board (such as its rules and rotation schedule) is available on our corporate website.

Corporate governance structure



General Meeting of Shareholders

All shares in TenneT's capital are held by the Dutch state, which is represented by the Ministry of Finance. Under the Electricity Act, only the Dutch state may hold voting interests in the company. A General Meeting of Shareholders is held within six months after the end of each financial year. The General Meeting of Shareholders discharged the Executive Board and Supervisory Board members from liability from their respective activities in the year 2024. Other shareholder meetings are held as and when deemed necessary by the Executive Board, Supervisory Board or the Shareholder.

Audit, Risk & Internal Control and Compliance & Integrity

The Audit, Risk & Internal Control and Compliance & Integrity (ARC) unit brings together the teams of Internal Audit, Risk Management & Internal Control and Compliance & Integrity. The integrated team provides benefits in terms of a single point of contact and an opportunity for more alignment and synergy. The resulting limitations to the independence of the Internal Audit team are managed through the outsourcing of periodic audits on the Risk Management & Internal Control and Compliance & Integrity teams to a third party. The ARC unit provides an integrated report on a quarterly basis towards the Executive Board and the Audit, Risk & Compliance Committee, who advises the Supervisory Board.

The ARC unit is led by the director ARC, who reports hierarchically to the CFO. The management of Risk Management & Internal Control and management of Compliance & Integrity report to the director ARC, who also manages Internal Audit. Both the director ARC and the Head Compliance & Integrity have a dotted reporting line to the CEO.

In line with the good governance practice of the three lines model by the Institute of Internal Auditors, the management of the organisation is responsible for directing and leading activities to achieve the objectives of the organisation. It establishes and maintains appropriate structures and processes for the management of activities, including governance, risk management and internal control. The teams Risk Management & Internal Control and Compliance & Integrity train, advise and support the organisation in their field of expertise. The team of Risk Management & Internal Control facilitates the company level management systems for risks and internal controls. The Compliance & Integrity team facilitates the company level management systems for prevention, detection and responding to risks related to Compliance & Integrity, including data privacy. Compliance & Integrity has representatives in both the Netherlands and Germany.

Outside the ARC unit, teams have been established to train, advise and support the organisation in the fields of health, safety and environment, business continuity management, information security and quality management (in line with NTA8120, ISO55001 and ISO9001).

The team of Internal Audit strengthens the organisation’s ability to create, protect and sustain value by providing the board and management with independent risk-based and objective assurance, advice, insight and foresight. Internal Audit drafts an audit plan after consultation with the Executive Board, the Audit, Risk & Compliance Committee and the external auditor. The internal audit plan is submitted to the Executive Board, and then to the Supervisory Board, for approval. The functioning of Internal Audit is annually assessed by the Executive Board after consultation with the Audit, Risk & Compliance Committee. The performance of the internal audit function is assessed at least every five years by an independent third party. The latest independent assessment was performed in December 2021.

External auditor

The General Meeting of Shareholders has the power to appoint external auditors to audit the financial statements and provide assurance on the Sustainability statements in the Integrated Annual Report, both as prepared by the Executive Board. These auditors report to the Supervisory Board and the Executive Board and their findings are presented in an independent auditor's report, an assurance report, an interim report (management letter) and an audit results report. The General Meeting of Shareholders appointed Deloitte Accountants B.V. as TenneT's external auditor as per 1 January 2020. In 2022, the Executive Board, Supervisory Board, shareholder and Deloitte have agreed to prolong the contract of Deloitte for another two year period in accordance with the prolongation options in the contract. The prolongation is for the financial reporting periods 2024 and 2025.

The functioning of the external auditor is supervised by the Supervisory Board, advised by the Audit, Risk & Compliance Committee, considering observations of the Executive Board.

The external auditor attends all meetings of the Audit, Risk & Compliance Committee, including the meeting at which the independent auditor’s report on the financial statements is discussed. If required, the external auditor also attends the relevant Supervisory Board meeting. In line with previous year the external auditor attended one meeting of the Strategic Investments Committee for information purposes.

Deviations from the Dutch Corporate Governance Code

Certain principles and best-practice provisions in the Code do not apply to TenneT. The reasons why and to what extent TenneT decided not to or could not adopt these particular principles and best practice provisions are explained hereafter:

Chapter 2:

2.1.3: Not applicable: no Executive Committee has been established at TenneT.
2.2.1: In line with the Dutch policy State Participations 2022, paragraph 5.2.3, Executive Board members are appointed for a term of four years and can be re-appointed for a second term of four years. Only in exceptional and well-motivated cases, Executive Board members may subsequently be reappointed twice for a third respectively fourth term of two years. So, the total maximum period for Executive Board members is 12 years. With this maximum of 12 years, TenneT deviates from principle 2.2.1 of the Code.
2.3.2: If the Supervisory Board has more than four members, the Code stipulates that the board shall appoint from among its members an Audit Committee, a Remuneration Committee, and a Selection and Appointments Committee. The TenneT Supervisory Board has combined the tasks of the latter two committees into a Remuneration and Appointments Committee.
2.3.8: Not applicable: no delegated Supervisory Board member is employed by TenneT.
2.7.5, 2.8.1 – 2.8.3: Not applicable: these provisions do not apply to TenneT because it has only one shareholder, being the Dutch state.

Chapter 3:

3.1.3: Not applicable: no Executive Committee has been established at TenneT.
3.3.2, 3.3.3: Not applicable: these provisions do not apply to TenneT because it has only one shareholder, being the Dutch state.

Chapter 4:

Regarding paragraphs 4.1 and 4.4 TenneT complies with the Code. Paragraphs 4.2, 4.3 and 4.5 are not applicable to TenneT because it has only one shareholder, being the Dutch state.

Chapter 5:

Given TenneT's two-tier board structure, this chapter is not applicable.

Compliance and integrity

A culture of compliance and integrity is essential for TenneT's sustainable success. Therefore, we strive to prevent and - at an early stage - identify and respond to compliance and integrity risks that could jeopardise the implementation of the company's strategy and objectives, leading to economic and/or legal consequences, as well as reputational damage.

Especially in view of the high annual investment volume, we consider the compliance risk becoming more significant. The Compliance & Integrity team (ARC-COI) is part of the ARC unit (Audit, Risk & Internal Control and Compliance & Integrity). The director of the ARC unit reports to the CFO.

Our Code of Conduct with our Guiding Principles 'Ownership', 'Connection', and 'Courage' and a number of compliance directives guide our employees to conduct business ethically and to comply with the applicable laws and regulations. All employees are requested to follow e-learnings on Code of Conduct topics and all new employees participate in compliance trainings as part of their onboarding programme.

Data privacy

In the course of its business activities, TenneT regularly processes personal data. We use standardised processes to assess risks and protect the rights of data subjects. Compliance with external laws and regulations, as well as internal rules, is ensured by the responsible specialist departments, which receive advice from the data protection team. Moreover, in each unit a privacy champion is the main point of contact for privacy matters. This liaison between the unit and the privacy team furthers two-way communication and to-the-point privacy advice by the privacy team. The independent function of the data protection officers is guaranteed within the ARC unit.

TenneT regularly reviews its processes for processing personal data and trains its employees to meet data protection requirements. Also, external service providers are requested to sign data protection agreements.

Advice & reporting

ARC-COI advises the business on various compliance, integrity and data protection aspects and regularly reports to the TenneT Executive Board and the Audit, Risk and Compliance Committee of the Supervisory Board regarding such topics.

Various channels exist through which (potential) Code of Conduct violations, including compliance and data protection issues, can be reported. Moreover, a speak up portal, which is operated by an external party, allows for (potential) Code of Conduct violations to be (anonymously) reported.

Identified compliance risks are dealt with by the Compliance and Integrity Committee in its quarterly meetings. In 2024, no compliance incidents with a material impact were identified for TenneT. Material impact is defined in our risk matrix as a breach that has a significant adverse effect on TenneT's reputation or financial position.

"A culture of compliance and integrity is essential for TenneT's sustainable success"

Executive Board

Executive Board biographies

Manon van Beek

Chair Executive Board /
Chief Executive Officer
54, Dutch (f)

Initial appointment: 1 September 2018
Expiry second term: 31 August 2026

Other positions qualitate qua:

- Chair of the Aufsichtsrat TenneT TSO GmbH
- Member Board TenneT Verwaltungs GmbH
- General Member Board of German-Dutch Chamber of Commerce DNHK

Other positions on a personal title:

- Member Supervisory Board of the Delft University of Technology
- Member Supervisory Board DNV Group AS
- Chair Board Refugee Talent Hub Foundation (until 3 October 2024)

Tim Meyerjürgens

Member Executive Board /
Chief Operating Officer
49, German (m)

Initial appointment: 1 March 2019
Expiry second term: 29 February 2028

Other positions qualitate qua:

- Member Board TenneT TSO B.V.
- Member Board TenneT TSO GmbH
- Member Board TenneT Verwaltungs GmbH
- Member Board TenneT Offshore GmbH
- Chair Supervisory Board of GreenneT
- Member Executive Board WAB (Wind Energy Association Bremerhaven) (until 31 December 2024)
- Member Board of Directors German Offshore Wind Energy Foundation
- Member Advisory Board Federal Association of Wind Farms Offshore
- Member Board of Directors FGH (Forschungsgemeinschaft für Elektrische Anlagen und Stromwirtschaft e. V.)
- Member Board of Trustees FGE (Forschungsgesellschaft Energie e. V.)
- Member Board of Directors FfE (Forschungsstelle für Energiewirtschaft e.V.)
- Member Board of Directors of VBEW (Verband der Bayerischen Energie und Wasserwirtschaft)
- Guest BDEW (Bundesverband der Energie- und Wasserwirtschaft)
- Council of the Thinktank Agora Energiewende
- Member of the Board of CERRE (Centre on Regulation in Europe)

Other positions on a personal title:

- Supervisory Board Member of LITGRID AB

Maarten Abbenhuis

Member Executive Board / Chief Operating Officer
51, Dutch (m)

Initial appointment: 1 January 2021
Expiry second term: 31 December 2028

Other positions qualitate qua:

- Member Board TenneT TSO B.V.
- Member Board TenneT TSO GmbH
- Member Members' Council Netbeheer Nederland

Other positions on a personal title:

- Member Supervisory Board of Royal Swinkels N.V.

Arina Freitag

Member Executive Board / Chief Financial Officer
54, German (f)

Initial appointment: 1 January 2022
Expiry first term: 31 December 2025

Other positions qualitate qua:

- Member Board TenneT TSO B.V.
- Member Board TenneT TSO GmbH
- Member Board TenneT Offshore GmbH
- Member Supervisory Board of GreenneT
- Member Board Flexcess GmbH

Other positions on a personal title:

- Beirat Landesbank Baden-Württemberg

Supervisory Board

Supervisory Board biographies

Ab van der Touw

Chair of the Supervisory Board
Member of the Audit, Risk and Compliance Committee
Member Remuneration and Appointment Committee
69, Dutch (m)

Initial appointment: 1 June 2018
Expiry second term: 31 May 2026

Principal position:

- Former CEO Siemens Nederland (until 1 April 2018)

Other positions:

- Member Board Deutsch-Niederländische Handelskammer
- Chair Supervisory Board Universiteit Leiden (until 1 September 2024)
- Chair Fonds Slachtofferhulp
- Chair Supervisory Board N.V. NIBA
- Member Board stichting GAK
- (External) member Ondernemingskamer Gerechtshof 's-Gravenhage
- Chair Advisory Council Ministry of Defence
- Chair Board Platform voor Techniek Talent
- Chair Supervisory Board Van Leeuwen Buizen Groep B.V.
- Chair Advisory Committee Nederlands-Indië Monument
- Chair Supervisory Board Van Dorp installaties B.V.
- Member Board United Europe (per 1 December 2024)

Essimari Kairisto

Vice Chair of the Supervisory Board
Chair of the Audit, Risk and Compliance Committee
58, German and Finnish (f)

Initial appointment: 1 May 2019
Expiry second term: 30 April 2027

Principal position:

- Former CFO Hochtief Solutions AG

Other positions:

- Member Supervisory Board Fortum Oyj
- Member Supervisory Board Freudenberg SE
- Member Supervisory Board Applus+ Services SA (until 1July 2024)
- Chair Board of Trustees Deutsch Finnische Gesellschaft
- Member Supervisory Board Iveco Group N.V.
- Member Supervisory Board Fugro N.V.
- Member Supervisory Board MCF Corporate Finance GmbH

Edna Schöne

Member of the Supervisory Board
Chair of the Remuneration and Appointment Committee
Member of the Strategic Investment Committee
53, German (f)

Initial appointment: 1 May 2019
Expiry second term: 30 April 2027

Principal position:

- Member Executive Board Euler Hermes AG

Other positions:

- Member of the Board „Lateinamerikaverein“
- Member of the Executive Committee „Ostausschuss der deutschen Wirtschaft“
- Member of the Executive Committee International Chamber of Commerce Germany
- Member of Unternehmens-beirat KfW Ipex
- Member of the Board LAVFE-Foundation

Stijn van Els

Member of the Supervisory Board
Chair of the Strategic Investment Committee
Member of the Remuneration and Appointment Committee
60, Dutch (m)

Initial appointment: 1 May 2019
Expiry second term: 30 April 2027

Principal position:

- Former CEO Shell Germany
- CEO of HyCC B.V. (the Hydrogen Chemistry Company)

Other positions:

- Chair Supervisory Board IDA Foundation

Maarten Camps

Member of the Supervisory Board
Member of the Strategic Investment Committee
60, Dutch (m)

Initial appointment: 1 September 2023
Expiry first term: 31 August 2027

Principal position:

- Chair UWV, Social Security and Public Employment Agency of the Netherlands

Other positions:

- Member of the Supervisory Board at the Reading and Writing Foundation
- Member of the Supervisory Board at the Jinc Continuity Foundation
- Member of the Supervisory Board of Jinc
- Member of the Advisory Board Stichting GAK

Kuldip Singh

Member of the Supervisory Board
Member of the Audit, Risk and Compliance Committee
51, Dutch (m)

Initial appointment: 1 September 2023
Expiry first term: 31 August 2027

Principal position:

- Former Global Head Digital & Business Transformation Customer Solutions with E.on Group

Other positions:

- Member of the Supervisory Board at KPMG
- Chair of the Supervisory Board at Whiffle
- Member of the Supervisory Board at ROM InWest
- Member of the Supervisory Board Innosportlab Sport & Beweeg (until 1 October 2024)
- Chair of the Supervisory Board of Kyndryl Nederland B.V.
- Member of the Executive Board Wickey Holding B.V.
- Lecturer at Governance University
- Chair of the Supervisory Board of Skoon Energy B.V.

Supervisory Board Report

Supervisory Board reflections on 2024

Introduction

2024 was a year in which the Supervisory Board saw significant progress in the field of safety. Improvements were evident in both TenneT's safety targets and its overall safety culture. The company continued to excel in ensuring the security of supply, achieving an impressive onshore grid availability rate of 99.99988%.

While TenneT's investments reached more than EUR 10.6 billion, the topics of affordability of the electricity system and congestion management remained key priorities for the Supervisory Board (SB) and Executive Board (EB).

The negotiations on the full sale of TenneT Germany were terminated on 20 June 2024. Following this, the EB promptly began developing an alternative structural funding solution for its German activities, exploring options in both private and public markets. This marked the start of another intensive process.

Safety

The SB welcomed the significant progress achieved in the area of safety. This progress was evident not only in the performance on the targets but also in the noticeable improvement in TenneT's safety culture. A particularly effective example highlighted to the SB was the introduction of a language-free movie on the Life-Saving Rules. This innovative tool greatly enhanced understanding among on-site workers, clearly conveying what actions to take — and what to avoid. The SB was especially pleased when, at the end of 2024, the German TSOs decided to adopt TenneT's Life-Saving Rules, to have one uniform framework for safety rules, creating a unified framework for safety standards.

Throughout the year, the SB closely monitored adherence to these rules, including violations. A key focus was maintaining a balance between enforcing consequence management for deliberate violations and fostering a safe, open culture where employees felt encouraged to speak up about safety concerns.

Financing

In the first half year of 2024, Project Ampere, the potential sale of TenneT Germany to the German State, was a key focus for TenneT and the SB. However, in June 2024 it was announced that negotiations with the German government regarding the possible full sale of TenneT Germany had been terminated.

Following this development, attention shifted from a full sale to exploring alternative structural funding solutions for TenneT Germany. To reflect this new direction, the project was renamed to Project Voltura. In addition to the Dutch State potentially providing the required capital for TenneT Germany, two primary options were identified to meet the company's equity need under Project Voltura:

1. issuing shares of TenneT Germany through a private placement; or
2. issuing shares through an initial public offering (IPO) of TenneT Germany.

The preparation for these options was extensively discussed by the SB.

In 2024, the Ampere Committee (a temporary committee of the SB as established in 2023) continued its work in preparing discussions for the full SB regarding Project Ampere. The committee was chaired by Ab van der Touw, with Essimari Kairisto as a member. After negotiations with the German government on the full sale of TenneT Germany were terminated in June 2024, the Ampere Committee was renamed into the Voltura Committee. The new committee is chaired by Essimari Kairisto with members including Ab van der Touw, Maarten Camps, and Edna Schöne. The Ampere/Voltura Committee convened ten times.

Throughout the year, the SB carefully monitored potential conflicts of interest involving EB members. This included considerations beyond the transaction itself, such as the potential impact on future roles and career developments. The SB also reviewed the overlap of positions between TenneT Holding and TenneT Germany in this context.

Beyond projects Ampere and Voltura, the SB regularly discussed preparations for establishing an organisational structure to enable potential investor participation in TenneT Germany.

The SB acknowledges the significant workload involved in these projects and extends its appreciation to the EB and all involved TenneT employees for their dedication to these initiatives while continuing to safeguard TenneT's core operations.

Affordability

To the SB, affordability is a key topic. Therefore the SB was pleased that TenneT published its position paper on affordability because it makes clear that TenneT needs the support of its stakeholders in moving **Towards a Reliable and Affordable Energy System**, which is the title of the position paper. In this paper, TenneT emphasises its social responsibility to

1. address the affordability of the energy system, including grid tariffs;
2. propose measures to reduce system costs;
3. illustrate the impact of potential changes; and
4. contribute to sustainable, long-term solutions.

Affordability will remain high on the agenda of the SB in 2025.

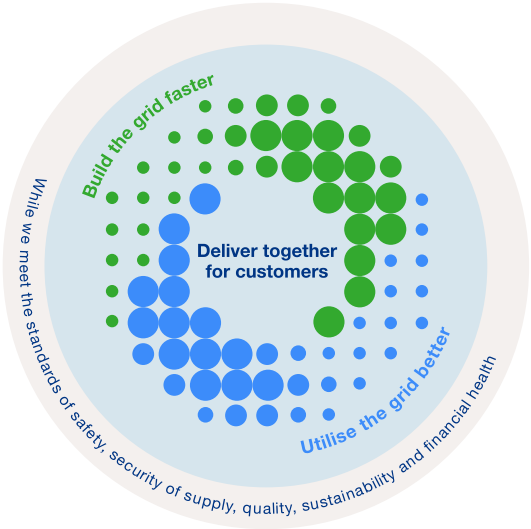
Sharpened strategy

TenneT sharpened its strategy in the beginning of 2024 in consultation with the shareholder. The shareholder was appreciative about the way TenneT conducted the consultation process.

The SB appreciates and supports TenneT's strong focus on customer needs.

Accelerating grid development, optimising grid utilisation and fostering collaboration to serve customers effectively are critical to addressing congestion, which ultimately benefits Dutch society as a whole. Internally, end-to-end solutions are essential for achieving this strategy, while external co-operation with stakeholders – including customers, DSOs, local authorities and regulators – is equally important. These efforts also positively impact German society, where congestion is yet less prevalent. In 2024, TenneT concluded flexible customer agreements to maximise available grid capacity.

Every regular SB meeting included discussions on TenneT's sharpened strategy and its implementation.



Congestion

During a strategy session on 13 November 2024, the SB emphasised the importance of prioritising customers in efforts to address congestion: the key focus point in the sharpened strategy.

The SB reviewed the findings of a Netbeheer Nederland study on congestion management, which highlighted two key issues:

1. an excessive focus on individual responsibilities rather than collaboration; and
2. insufficient prioritisation of the customer's perspective.

TenneT's appointment of a Director of Customer Connections and Capacity was recognised in the review as a best practice for addressing these challenges.

Within the SB, acceleration measures were discussed in several instances.

The SB greatly appreciated the increased co-operation between TenneT, Netbeheer Nederland and ACM over 2024, which is based on mutual trust and transparency, to address the challenges of congestion.

CSRD Readiness

The SB devoted considerable attention to TenneT's readiness for the Corporate Sustainability Reporting Directive (CSRD). Sustainability is deeply linked to TenneT's role in the energy transition; however, challenges arose in ensuring that relevant data was accessible across all units. The EB, in collaboration with the Audit, Risk, and Compliance Committee (ARCC) and external and internal auditors, identified steps to comply with CSRD guidelines.

SB composition

Diversity

The SB consists of six members, with a 33% female and 67% male ratio. TenneT strives for an equal balance in female/male representation within the SB towards 2030. Additionally, three members have international cultural backgrounds: Edna Schöne (German and Swedish), Essimari Kairisto (German and Finnish) and Kuldip Singh (Dutch and Indian).

This diversity of cultural perspectives, combined with international expertise and executive experience, ensures balanced and informed decision-making. The SB effectively challenged the EB where necessary (e.g., on IT audit findings) and acted as a constructive sparring partner (e.g., during the Voltura process).

Ancillary positions SB members; no conflict of interest

The ancillary positions of SB members, as listed on TenneT's website and in the SB biographies, were monitored during 2024 for potential (perceived) conflicts of interest. It was concluded that there are currently no potential conflict-of-interest-situations at hand. More specifically, in this respect it is noted that both the Chair of the Supervisory Board position for Kuldip Singh at Skoon Energy B.V., nor the Supervisory Board position of Essimari Kairisto with Fortum Oyj conflict with the unbundling requirements from the Dutch Energy Act. Potential conflicts of interest are considered once again for each SB meeting when the agenda is set: the company secretary considers carefully whether there is any topic on the agenda that might lead to a potentially (perceived) conflict of interest. In that case the respective SB member would not be granted access to the documentation and/or decision making, which were to be minuted. In each SB meeting it is furthermore discussed at the start of the meeting whether there is a potential conflict of interest. This has not been the case in 2024.

EB composition

The EB consists of a CEO, a CFO and two COOs, with a 50% female and 50% male ratio. TenneT strives to maintain an equal balance in female/male EB members.

Two of the EB members are Dutch (the CEO and one COO); two are German (the CFO and one COO). With their various expertise, experience and personality the EB is a complementary - and a strong team. Over 2024, the SB appreciated the close co-operation of the EB as visionary leaders of TenneT and resilience where the topic of Ampere/Voltura is concerned.

In 2024, the SB nominated Maarten Abbenhuis for reappointment as statutory director of TenneT Holding B.V. and was very content about his reappointment. Maarten has played a fundamental role in TenneT's growth agenda in recent years: since his appointment as COO in 2020, TenneT's investments tripled from EUR 3.4 billion in 2020 to more than EUR 10.6 billion in 2024. Security of supply remains at world class level with 99.99988% in 2024 under Maarten's leadership. Within the SB and EB, Maarten is well respected for his knowledgeable contribution, insights and challenges to all topics at hand, even when not directly related to his own portfolio. The SB appreciates the good working relationship that Maarten has with the Dutch works council.

EB performance

The SB prepared the dialogues with the various EB members about their year-end reflections and performance. These dialogues were conducted by the RAC with the individual EB members and with the CEO about the functioning of the EB as a team.

The EB targets 2024 were based on TenneT's corporate objectives for TenneT's previous strategic pillars (i) energise TenneT's people and organisation; (ii) secure of supply today and tomorrow; (iii) drive the energy transition and (iv) safeguard TenneT's financial health.

The performance on these targets was discussed in combination with further measures where necessary. Individual performance and further leadership development were discussed with the individual EB members. A 360 degree feedback process for the EB members took place; the results and actions were discussed in the RAC and will be a part of the performance dialogues.

The overall conclusion on the functioning of the EB as a team was that the EB is a strong, well forged team that acted as one with the challenges of ensuring TenneT's future financing needs in combination with 'TenneT's business as unusual', with the ultimate goal of driving energy transition. The tone from the EB is open and transparent. Countervailing power, where needed, was used constructively.

For the EB capabilities reference is made to the Sustainability statements section Governance.

Set-up of SB- and committee meetings

TenneT's SB consists of four committees: the Audit-, Risk and Compliance Committee ("ARCC"), the Remuneration and Appointment Committee ("RAC"), the Strategic Investment Committee ("SIC") and the (temporary) Ampere/Voltura Committee. These committees prepare and guide SB decision making. Each SB member has access to all committee meeting documentation and is welcome to join the respective committee meetings. The respective chairs of the committees give feedback to the SB about the background of the requested decisions and content of the committee dialogues. For detailed information about the roles and responsibilities of the SB and its committees, reference is made to the 'Rules Governing the Supervisory Board' on TenneT's website.

SB meetings

The SB met 15 times. The SB held ten specific meetings on Ampere/Voltura in addition to the regular SB meetings, where the topic of Ampere/Voltura was also discussed. SB meetings always start with a 'SB-only' part to prepare the SB meeting exclusively with SB members present so that open SB-alignment on the topics on the agenda is ensured. All SB meetings also end with the opportunity for the SB to reflect by themselves.

After the SB-only part at the start of each SB meeting, it is established between the SB members and EB members whether there is a potential or perceived conflict of interest.

In 2024, there were no potential conflicts of interest at hand.

The percentage of independent board members is 100%.

The SB discussed and approved the following material topics based on the double materiality assessment:

Safe working environment

This topic is the first on every SB agenda and extensively discussed in the SIC. Results and measures taken were challenged in SIC meetings, where regular updates were discussed about Life Saving Rules violations and consequence management. The SB also paid attention to the safety and (mental) health of TenneT's workforce, among others in the yearly meeting with the SB, EB and Dutch works council in November 2024.

Security of supply

This topic is the second topic on every SB agenda and extensively discussed in the SIC. The SIC requested a comparison on security of supply data between TenneT and other European TSOs and DSOs. The comparison showed that in TenneT's high-voltage grid performed better in 2023 than the average Dutch DSOs grids.

Climate change

The energy transition is all about climate change. The SB discussed Target Grid, TenneT's vision on the energy system of the future, which includes sector coupling and innovative solutions (multi-hub system) to improve security of supply whilst making it possible to realise less converter stations. Choices about dilemmas such as whether to choose for SF_6 insulated switchgear installations or use of alternative gases (that are potentially more costly during its development on the level of 380 kV and higher), or for air insulated switchgear (needing more m^2 space with potentially more costly and more time consuming land acquisition) were tested by the SB regularly.

Resource use and circularity

The Climate Transition Plan was presented in the ARCC. It describes TenneT's performance with respect to these targets, outlines the challenges that TenneT faces to get there (for instance in greening TenneT's grid losses) and TenneT's outlook with respect to concrete actions TenneT is taking/will take in the near future to meet these ambitions.

Responsible Supply Chain Practices

The SB noted that TenneT reported on its supply chain due diligence in Q2 2024 to the "*Bundesamt für Wirtschaft und Ausfuhrkontrolle*".

The report included elaborations on human rights risks for TenneT's own employees (e.g. safe working conditions, freedom of association, fair wages), human rights of workers in the supply chain (e.g. forced labour, child labour, safe working conditions) and environmental protection (e.g. responsible waste management, use of harmful substances).

Good employment

With the EB, the SB is of the opinion that the diverse composition of society should be reflected in the composition of the workforce. Furthermore, it believes that diverse workforce leads to more innovation and job satisfaction. Therefore, the SB and EB discussed measures taken to increase inclusion, diversity and equality (which means that people may need to be treated differently to provide an equality of opportunity). Reference is made to the paragraph about Inclusion, Diversity and Equality hereafter.

The EB monitored on a quarterly basis to what extent the TenneT's employees feel informed, supported and are engaged in the "Pulse Surveys". The SB noted appreciatively that in the challenging times that TenneT had in 2024 in view of its equity financing and the split between the Dutch and German organisations, the targets (more than > 75% of the employees felt informed; more than > 70% supported and more than > 85% were engaged) were achieved. On the other hand, the SB is concerned about long-term sickness rates.

Delivering the energy transition

A large part of this priority is covered by TenneT's investment portfolio with a value of several billions in investments in the Dutch and German grids – and as such, discussed in the SIC. Several innovative and sustainable initiatives were discussed in the SB, such as the innovative Multiterminal Hub-Technology. This approach allows for a better and more cost-efficient transport of offshore wind energy and provides a future-proof concept regarding a future DC "backbone grid"; furthermore, this system requires less converter stations to be realised than the conventional connections. The SB considers these innovations important because they positively impact security of supply and the affordability of the energy transition.

In 2024, the SB discussed the following updated policy:
1. Climate Transition Plan

In 2024, the SB discussed and approved (the updates of) the following policies:
1. Internal Audit Charter
2. Integrated Performance Plan
3. Financing Plan
4. Rules Governing the Supervisory Board

In May, the SB visited the shipyard in Haugesund, Norway, where they experienced the finalisation of the construction of the DolWin5 platform (900 MW) from up close. Because of among others the sheer size of the platform some of the challenges in realising these platforms became clearer – the SB found the working visit very insightful.

SIC

The SIC consists of Stijn van Els (chair), Edna Schöne and Maarten Camps. The SIC met 5 times. Both COOs participated in these meetings. Safety and Security of Supply were always the first topics to be discussed, followed by the investment proposals to be approved by the SB. 88 projects were discussed and recommended for approval to the SB for a total value of EUR 55 billion. The quarterly Safety- and Investment reports were also on the SIC agenda. Both COOs participated in these meetings.

The SIC regularly discussed cost control measures; successful examples are TenneT's increasing standardisation and long-term framework agreements.

Next to the topics reported under CSRD material topics:
- consequences of the investments for the NEP 2037-2045 (a climate-neutral energy system in 2045) were discussed;
- special attention was paid to the way TenneT monitors suppliers' performance management;
- special attention was regularly paid to exception reports, where project progress and price increases were closely monitored and discussed; and
- a deep dive on the innovative Multiterminal Hub-Technology was done. This approach allows for a better and more cost-efficient transport of offshore wind energy and provides a future-proof concept regarding a future DC "backbone grid". The SIC embraces these innovative initiatives that contribute to affordability, sustainability and reliability.

The SIC paid a working visit in November to TenneT's Safety Impact Training Centre in Hamburg and to the Elbe crossing.

The external auditor attended the SIC meeting in November to observe the controls exercised in the SIC; good controls were confirmed.

The shareholder was regularly informed about cost developments.

ARCC

The ARCC consists of Essimari Kairisto (chair), Ab van der Touw and Kuldip Singh. The ARCC met 4 times in 2024. The CEO and CFO participated in these meetings.

Financial reporting was discussed in relation to the Integrated Annual Report (IAR), the Half-year report and the related documentation by the external auditor. TenneT's quarterly reports on finance were also discussed in the ARCC. Several improvements were implemented, such as incorporating a five-year liquidity forecast in the quarterly finance report.

Other main topics discussed were cyber security, IT developments and resolving audit findings regarding these topics. Because the unit Business Technology Organisation, responsible among others for IT technology, falls within the portfolio of COO Maarten Abbenhuis, he participated in the ARCC and SB dialogues about these topics. In the current geopolitical dynamics, the topic of (cyber) security will remain high on the agenda of the ARCC and SB. The ARCC will also closely monitor resolving audit findings in general.

Further topics discussed were quarterly updates on CSRD readiness, risk management, updates on legal proceedings and legal developments and the yearly evaluation of the audit function as well as the yearly update on tax developments.

In the ARCC the implementation of a reinsurance captive for TenneT's Dutch and German offshore grid connection systems during construction and operation was monitored. The SB is very pleased that the license has meanwhile been granted by the Dutch Central Bank.

All ARCC meetings were attended by the internal and external auditors.

The findings and recommendations of TenneT's external auditor in the management letter were discussed in the ARCC November meeting.

Audit by the External Auditor/ Management Letter 2024

In its management letter, the external auditor was critical about TenneT's ongoing challenges in addressing fraud risks, IT-related risks and ESG/CSRD reporting. These topics were discussed in the ARCC on a quarterly basis, where progress was discussed, challenged and monitored together with the EB and the internal auditor. The external auditor was able to report progress on these three topics over the full year 2024.

Integrated reporting and audit; financial statements

In 2024, the SB discussed the financial statements for the financial year 2023 as part of the Integrated Annual Report (IAR) 2023, as well as the Green Finance Report 2023, the independent auditor's report, the assurance report of the independent auditor related to non-financial information, the interim report, management letter and the audit results report issued by TenneT's external auditor. The ARCC meeting to prepare the financial statements over 2023 and IAR was preceded by the regular meeting between the ARCC and external auditor without EB members nor the company secretary being present to ensure an open dialogue on matters related to the IAR. The ARCC prepared the SB dialogues about these documents and advised on them. As a result, the SB endorsed the documents and recommended that the General Shareholder Meeting adopt the financial statements. The SB recommended the General Shareholder Meeting to discharge the EB members from liability for its management of the company in 2023 and discharge the SB from liability for its supervision of the management of the company over the year 2023, both of which took place.

As part of quarterly performance cycle, the SB reviewed the 2024 internal quarterly reports on Integrated Performance, Finance, Investments, Audit-, Risk and Compliance and Safety. Furthermore, the results from internal risk and control assessments, the Integrated Performance Plan 2025-2027, the 2025 budget and Financing Plan 2025 were approved. The SB oversees setting targets related to material impacts, risks and opportunities, through the aforementioned Integrated Performance Plan. Monitoring of the progress (actual performance versus the targets) was performed by discussing the quarterly Integrated Performance Reports.

RAC

The RAC consists of Edna Schöne (chair), Ab van der Touw and Stijn van Els. The RAC met 8 times. The CEO and the director of the unit People (as per 1 September the German and Dutch directors of the units People) participated in the meetings and stepped out where appropriate.

The RAC prepared and conducted the performance dialogues with the individual EB members and with the CEO about the functioning of the EB as a team.

The RAC prepared the reappointment of Maarten Abbenhuis as COO.

The management review is yearly discussed in the RAC to monitor the development of the Senior Leadership Team and of potential future EB successors.

The RAC carefully considered the composition of the future TenneT Holding, TenneT Netherlands and TenneT Germany boards and conducted extensive dialogues with the shareholder about the remuneration of the future German EB. The RAC also conducted a careful selection process for the CEO of TenneT Germany. The SB were very pleased that Tim Meyerjürgens was appointed as CEO of TenneT Germany per 1 January 2025; selection of further EB members for TenneT Germany will be continued in 2025.

Inclusion, Diversity and Equity

Diversity means to include different perspectives, experiences, cultural backgrounds and characteristics among TenneT's employees to contribute to TenneT's results, for instance by challenging established ways of thinking and interacting with different perspectives.

The RAC supported the launch of the Inclusion, Diversity and Equity (ID&E) Program Office in 2024.

The RAC noted appreciatively that the ID&E program is further supported by two new ID&E Officers.

The RAC also appreciated the way TenneT once again managed to attract and onboard more than 1,350 new colleagues in 2024. The RAC noted the target for female hires (32%) was met in 2024 32%) and the target for international hires (10%) has been met with 11%. The RAC will keep monitoring diverse hiring as well as maintaining an inclusive culture and the targets set to that end. Furthermore, the RAC will keep challenging and monitoring the development of talented leaders.

The RAC highly valued initiatives that provide a (temporary or permanent) workplace for refugee talent.

Attendance SB- and Committee meetings

SB attendance 2024	Supervisory Board	Audit, Risk and Compliance committee	Remuneration and Appointment Committee	Strategic Investment Committee	SB Ampere/ Voltura Committee
A.F. van der Touw (Chair)	15/15	4/4	8/8		9/10
E. Kairisto	14/15	4/4			10/10
A.C.C. van Els	13/15		7/8	5/5	
E.M. Schöne	13/15		8/8	5/5	3/3
M.R.P.M. Camps	13/15			5/5	3/3
K. Singh	13/15	2/4			

Dutch Works Council

The SB members with enhanced recommendation rights (Stijn van Els and Kuldip Singh) met with the Dutch Works Council (OR) three times. Topics discussed were among others Ampere/Voltura, the split of TenneT, Maarten Abbenhuis' reappointment, growth of the organisation and the workload within TenneT.

The full SB met with the OR and the EB two times, once in the form of a Permanent Education Session on an engaged, healthy, diverse and growing workforce and once in the yearly meeting on the topic of 'mental health and resilience', where an engaging workshop was organised with an external speaker.

Capability matrix

Competencies	A.F. van der Touw (chair)	E.M. Kairisto (vice-chair)	A.C.C. van Els	E. Schöne	K. Singh	M.R.P.M. Camps
General management	high	high	high	high	high	high
Financial management	medium	high	medium	medium	high	medium
Capital market/ investor relations	medium	high	medium	medium	low	medium
Technology	high	low	high	low	high	low
IT	medium	medium	high	medium	high	low
Risk management	high	high	high	high	medium	medium
Project management (large infrastructure projects)	high	high	high	high	low	low
Human resources	high	high	high	high	medium	high
Marketing/Public Affairs/ Brand image	high	medium	high	high	high	medium
Regulation	medium	medium	medium	high	medium	medium
Public sector/State owned companies	high	medium	medium	high	medium	high
Political/managerial experience and network the Netherlands	high	low	medium	low	medium	high
Political/managerial experience and network Germany	high	high	high	high	medium	high
International background/ experience	high	high	high	medium	high	high
Legal	medium	medium	medium	high	low	medium
Experience in energy-, industrial and/or financial sector	high	high	high	high	high	medium
Knowledge of Dutch Corporate Governance Code	high	medium	medium	medium	high	medium
Corporate Social Responsibility/ CSRD	high	high	high	high	high	medium

● high ● medium ● low

SB team building session and self evaluation

In March a team building session was organised given the new composition of the SB team.

The SB self-evaluation took place on 13 November 2024; the most important outcomes and room for improvement were to apply more focus on the dialogues with the EB about strategic dilemmas; less on details.

In the SB self-evaluation the capability matrix was discussed, with the overview of each SB members capabilities as listed hereafter. The SB members have kept their knowledge up to date in their other executive and non-executive roles as well as by attending TenneT deep dives, dialogues and permanent education sessions.

Permanent Education sessions

In 2024, Permanent Education sessions were organised about Affordability of the Energy System, on an engaged, healthy, diverse and growing workforce, as well as on management of mental resilience (together with the Works Council and EB) and on Congestion.

Appreciation

Last, and certainly not least, the SB would like to express its appreciation for the hard work and dedication to the energy transition demonstrated by everyone working at - and for TenneT, whether in the control rooms, in the field, in TenneT's company canteen or on the offshore platforms, whether as EB member, as (sub)supplier or for TenneT's shareholder: here is a whole-hearted "Thank you!".

Remuneration report

Remuneration policy

The remuneration policy of TenneT Holding B.V. mainly aims to offer remuneration at a level that will attract and retain qualified and capable statutory directors (including those who come from within the organisation), being Executive Board members. This also applies to Supervisory Board members. The remuneration policy meets the best-practice provisions on remuneration as defined in the Dutch Corporate Governance Code 2022. Since all of the shares in TenneT Holding B.V. are held by the Dutch state, TenneT's remuneration policy falls within the scope of the State Participations Policy 2022 ('Nota Deelnemingenbeleid Rijksoverheid 2022', published 1 July 2022).

TenneT's remuneration policy has been approved by the Shareholder and is effective as of January 2020. It is also in line with the State Participations Policy 2022. The most important elements of the remuneration policy are described hereafter.

Employment market reference group

Remuneration for the statutory board members of TenneT has been set using a benchmark, a comparison with organisations competing in the same business and employment markets as TenneT. These organisations include:

- International transmission system operators (TSOs);
- Operators of infrastructure;
- Installation/engineering companies;
- Building companies;
- Financial institutions.

The outcome of this benchmark showed a higher remuneration level than TenneT's current level of remuneration, which has been set by the Shareholder in line with the remuneration policy as of January 2020, and the State Participations Policy 2022, and includes equal pay, regardless of gender or nationality.

The Supervisory Board reviews the remuneration policy for statutory board members once every four years. The review process has started during 2024. Together with the Shareholder and Korn Ferry a remuneration level benchmark was conducted. The Supervisory Board will follow up on the topic with the Shareholder in 2025.

Remuneration norm

The moment the Supervisory Board appoints a new statutory director it applies the remuneration policy as approved by the Shareholder. For 2024, the fixed remuneration is capped at the CEO level, excluding pension and other allowances, and was set at EUR 456,504 for TenneT's Chief Executive Officer (CEO). The fixed remuneration of the other Executive Board members (CFO and both COOs) has been capped at 90% of the remuneration of the CEO. The Supervisory Board applies the principle of equal pay to the remuneration policy for the statutory directors.

If, in the opinion of the Supervisory Board, the maximum remuneration as required by the Shareholder leads to unacceptable risks to the organisation because no suitable candidates can be found to fulfil the role of statutory director, the Supervisory Board shall consult the Shareholder.

The Supervisory Board decides on the annual increase in salary. If the remuneration of a statutory director has reached its maximum, further increases will be limited to the structural increments as agreed upon in the collective labour agreement which is applicable to all employees of TenneT TSO B.V. including Ms. Freitag and Mr. Meyerjürgens. Whilst being based in Germany, both have a Dutch labour agreement with TenneT.

Service agreement and compensation for early termination

In principle, with effect from 2017, service agreements for Executive Board members – with the exception of internal appointments – are concluded for a fixed term of four years. In the event that the service contract is terminated prior to the expiry date, TenneT pays a maximum of one year's salary as a termination compensation, unless the statutory director resigns voluntarily, or the termination is the result of his or her actions. As an exception to our policy, agreed with the Shareholder, Ms. Freitag will also receive this termination compensation if she will not be appointed and/or employed for a second term at the initiative of TenneT.

Pensions

The retirement age of statutory directors is based on the statutory pension age for Dutch contracts for statutory directors based in the Netherlands. The retirement age of statutory directors based in Germany is based on the statutory pension age as applicable in Germany.

Statutory directors participate in the regular pension scheme of the country in which they are covered for social insurance.

Statutory directors based in the Netherlands participate in a pension arrangement as defined in the collective labour agreement and as applicable for all employees in the Netherlands. The employer and employee contribution for the statutory directors follow the same rules as applicable to all other employees. Dutch pension regulations define the pensionable salary up to the fiscal maximum of EUR 137,800 (2024).

The statutory directors based in the Netherlands receive the same compensation as TenneT employees with an income above the fiscal maximum pension salary. The compensation is based on the fiscally allowed age dependent premium percentages up to fiscal maximum pension salary.

German based statutory directors participate in the regular pension scheme ('Beitragsplan') or any other pension scheme that such statutory director may have already been entitled to.

In Germany TenneT currently has two pension schemes. For employees starting after 1 April 2008 Pension scheme 2008 is applicable. Mr. Meyerjürgens joined TenneT's TSO GmbH predecessor E.ON Netz GmbH on 1 March 2003. At that time a company pension based on the pension scheme 2001 was provided to him. Mr. Meyerjürgens kept participating in his pension scheme. For Ms. Freitag the Pension scheme 2008 is applicable. Further reference is made to note 18 of the consolidated financial statements.

Other allowances and secondary benefits

The total remuneration package for statutory board members includes an allowance for necessary out-of-pocket expenses, the use of a lease car (of a type comparable to those provided to statutory board members of similar organisations) including possible private use, accident and directors' and officers' liability insurance, and thirty days paid leave per annum. Sign-on bonuses and recruitment incentive payments are not applicable for statutory board members.

Secondary benefits also include a nominal contribution towards health insurance premiums and the choice of other flexible individualised benefits, such as converting holiday allowance into extra leave hours. Most of these benefits are applicable to all TenneT employees, working under the Dutch collective labour agreement. The company does not provide any loans, loan guarantees or advances against future earnings to any statutory board members.

Taxes

TenneT and the Dutch Tax Authorities reached a tax settlement on the allocation of wage and income taxes to the Netherlands and Germany. TenneT shall fully indemnify, hold harmless and compensate statutory directors against all claims, demands, actions, suits, damages, liabilities, losses, settlements, judgements, costs and expenses (including but not limited to reasonable attorney's fees and costs), which arise out of or relate to any act or omission of TenneT in relation to the double taxation claim. As a result, statutory board members will neither have any disadvantage of the international allocation of their remuneration, nor will there be a gain advantage from the advancing arrangement with TenneT, since it will be settled afterwards.

In 2022, a Mutual Agreement Procedure was requested on behalf of Ms. Van Beek, Mr. Jager (as former statutory board member) and Mr. Voorhorst (as former statutory board member) between the competent Dutch and German authorities based on Article 25 of the bilateral tax treaty concluded between the Netherlands and Germany (2012) for the tax years 2018 and 2019. This request to remedy double taxation has been formally brought forward to the competent Dutch and German tax authorities and parties.

(Re-)Appointment of Executive Board members and Supervisory Board members

In line with the Dutch policy State Participations 2022, both Executive Board as well as Supervisory Board members are appointed for a term of four years and can be re-appointed for a second term of four years. Only in exceptional and well-motivated cases, Executive Board and Supervisory Board members may subsequently be reappointed twice for a third respectively fourth term of two years. So, the total maximum period for both Executive Board and Supervisory Board members is 12 years.

Board remuneration

This section specifies the current remuneration for statutory directors as well as members of the Supervisory Board.

During 2024, the Executive Board of TenneT was composed of the following statutory board members:

	Position	Date of first appointment	End of 1st term	End of 2nd term
M.J.J. van Beek	CEO	1 September 2018	31 August 2022	31 August 2026
T.C. Meyerjürgens[1]	COO	1 March 2020	29 February 2024	29 February 2028
M.C. Abbenhuis	COO	1 January 2021	31 December 2024[2]	31 December 2028
A.C.H. Freitag	CFO	1 January 2022	31 December 2025	

1 As of 1 March 2019, Mr. Meyerjürgens has been appointed as director; as of 1 March 2020, Mr. Meyerjürgens has been appointed as statutory director.
2 Mr. Abbenhuis has been reappointed for a second four-year term, from 1 January 2025-31 December 2028.

Ms. Van Beek and Ms. Freitag are employed for the duration of a fixed-term. Mr. Abbenhuis and Mr. Meyerjürgens both have open-ended underlying employment contracts.

Remuneration of the statutory directors

Total remuneration

2024 (in EUR thousand)	Fixed remuneration	Gross Pension	Net pension	**Total pension**	Other allowance[1]	**Total remuneration**
Current board members						
M.J.J. van Beek	457	25	49	74	37	568
T.C. Meyerjürgens	411	124	-	124	36	571
M.C. Abbenhuis	411	25	43	68	21	500
A.C.H. Freitag	411	36	-	36	43	490
Total remuneration current board members	**1,690**	**210**	**92**	**302**	**137**	**2,129**

1 The column 'Other allowance' includes certain perquisites provided to statutory directors in 2024, such as life-cycle allowance, an employer contribution to the Dutch statutory health insurance as part of the Collective Labour Agreement. The costs shown in this column are excluding the annual employer contributions to the Dutch and German social security. For Ms. Van Beek and Mr. Abbenhuis the 2024 employer social contributions amounted to EUR 11 thousand. For Ms. Freitag and Mr. Meyerjürgens the 2024 employer social contributions amounted to EUR 10 thousand.

2023 (in EUR thousand)	Fixed remuneration	Gross Pension	Net pension	**Total pension**	Other allowance[1]	**Total remuneration**
Current board members						
M.J.J. van Beek	437	25	45	70	33	540
T.C. Meyerjürgens	394	110	-	110	35	539
M.C. Abbenhuis	394	24	39	63	21	478
A.C.H. Freitag	394	31	-	31	45	470
Total remuneration current board members	**1,619**	**190**	**84**	**274**	**134**	**2,027**

1 The column 'Other allowance' includes certain perquisites provided to statutory directors in 2023, such as life-cycle allowance, an employer contribution to the Dutch statutory health insurance and a one-off payment as part of the Collective Labour Agreement. The costs shown in this column are excluding the annual employer contributions to the Dutch and German social security. For all Executive Board members the 2023 employer social contributions amounted to EUR ten thousand.

Fixed remuneration

In September 2023 the salaries of all statutory directors have been increased by EUR 270 gross per month and 6%. This increase is fully applied in the 2024 figures. In line with the Collective Labour Agreement no remuneration increase in 2024 was applied.

Pension cost

The pensions of all Dutch statutory board members are administered by the ABP Pension Fund. The pension accrual is based on an average pay system up to the fiscal maximum (gross pension). With respect to the fixed remuneration exceeding the fiscal maximum, the Dutch statutory board members may participate in a net pension system.

As explained in the remuneration policy the pension of the German statutory directors is based on actuarial calculations in line with IAS19. The amount is equal to the yearly service costs.

Other allowances and secondary benefits

All statutory directors have a company car available to them. The value of private use is part of the Other allowances as shown in the table. The company does not reimburse its statutory directors for any personal income tax consequence resulting from the private use of leased cars.

For Dutch statutory directors the secondary benefits as shown in the remuneration table, include a contribution to health insurance and a budget for flexible terms of employment. Each statutory director received an allowance for necessary out-of-pocket expenses, of EUR 2,196 a year. This allowance is not included in the remuneration table as it is a compensation for expenses incurred and hence not considered a remuneration component.

The total remuneration paid to the statutory directors is reconciled to and further disclosed in note 25 of the consolidated financial statements.

Remuneration ratio

The remuneration ratio CEO to employees is measured by comparing the total remuneration, (including fixed salary, pension benefits and other allowances) of the CEO with the median total remuneration (including fixed salary, pension benefits and other allowances) of all other employees. The remuneration ratio CEO to senior management is measured by comparing the total remuneration (including fixed salary, pension benefits and other allowances) of the CEO with the median total remuneration (including fixed salary, pension benefits and other allowances) of the Senior Leadership Team (SLT). The SLT consists of 25 directors, all direct reports to the Executive Board.

The remuneration ratio of the highest paid employee to employees is measured by comparing the annual total compensation, with the median of all other employees. As of 2023 the remuneration CEO paid employee to average of all other employees is a new ratio calculation. Based on Dutch Corporate Governance Code 2022 it is also required to disclose current year's ratio and five previous years. That and the fact that the calculation base changed makes up for the fact that the remuneration ratio differ to what was reported in the IAR of 2019. The cost components for these years have been reassessed

Employees with a part-time employment contract are not recalculated to one full-time equivalent. The same is applied to employees joining TenneT during the course of the year, their remuneration is not recalculated to twelve months.

	2024	2023	2022	2021	2020	2019
Remuneration ratio CEO to median of employees	5.9	5.6	5.9	5.8	6.2	4.7
Remuneration ratio CEO to average of employees	5.8	5.5	5.7	5.7	6.2	4.6
Remuneration ratio highest paid employee to median of employees[1]	6.0	5.6	6.8	7.0	7.0	4.7
Remuneration ratio CEO to median of SLT	1.8	1.7	1.5	1.9	1.8	1.7

1 In the years 2019 and 2023 the CEO is the highest paid individual. Mr. Meyerjürgens is in the years 2020 till 2022 and 2024 the highest paid individual, due to pension entitlements.

Remuneration of the Supervisory Board

The remuneration policy for the Supervisory Board defines the remuneration for the different roles and committees of the Supervisory Board. During 2024 each Supervisory Board member was serving on one, two or three of a total of four committees. The roles and responsibilities of members of the Supervisory Board were as follows:

	Supervisory Board	Audit, Risk and Compliance Committee	Remuneration and Appointments Committee	Strategic Investments Committee	Ampere/ Voltura Committee[1]
A.F. van der Touw	Chair	Member	Member		Member
E. Kairisto	Vice chair	Chair			Chair
A.C.C. van Els	Member		Member	Chair	
K. Singh	Member	Member			
M.R.P.M. Camps	Member			Member	Member
E. Schöne	Member		Chair	Member	Member

1 Temporary special committee on financing solution for TenneT Germany. In 2024, the Ampere Committee (a temporary committee established in 2023) continued to prepare discussions in the full Supervisory Board on Ampere. Mr. Van der Touw chaired this committee, MS. Kairisto was a member. After the termination of the negotiations with the German government on the full sale of TenneT Germany, in June 2024, the Ampere Committee was renamed into the Voltura Committee. Ms. Kairisto chairs this committee, Mr. Van der Touw, Mr. Camps and Ms. Schöne are members.

In September 2023 the salaries of all statutory directors have been increased by EUR 270 gross per month and 6%. This increase is fully applied in the 2024 figures. In line with the Collective Labour Agreement no remuneration increase in 2024 was applied.

Supervisory Board member remuneration was as follows:

(in EUR)		
Chair	37,844	per annum
Vice-chair	31,124	per annum
Member	28,136	per annum
Audit, Risk and Compliance Committee	8,280	per annum
Remuneration and Appointment Committee	6,512	per annum
Strategic Investment Committee	6,512	per annum
Ampere/Voltura Committee	6,512	per annum

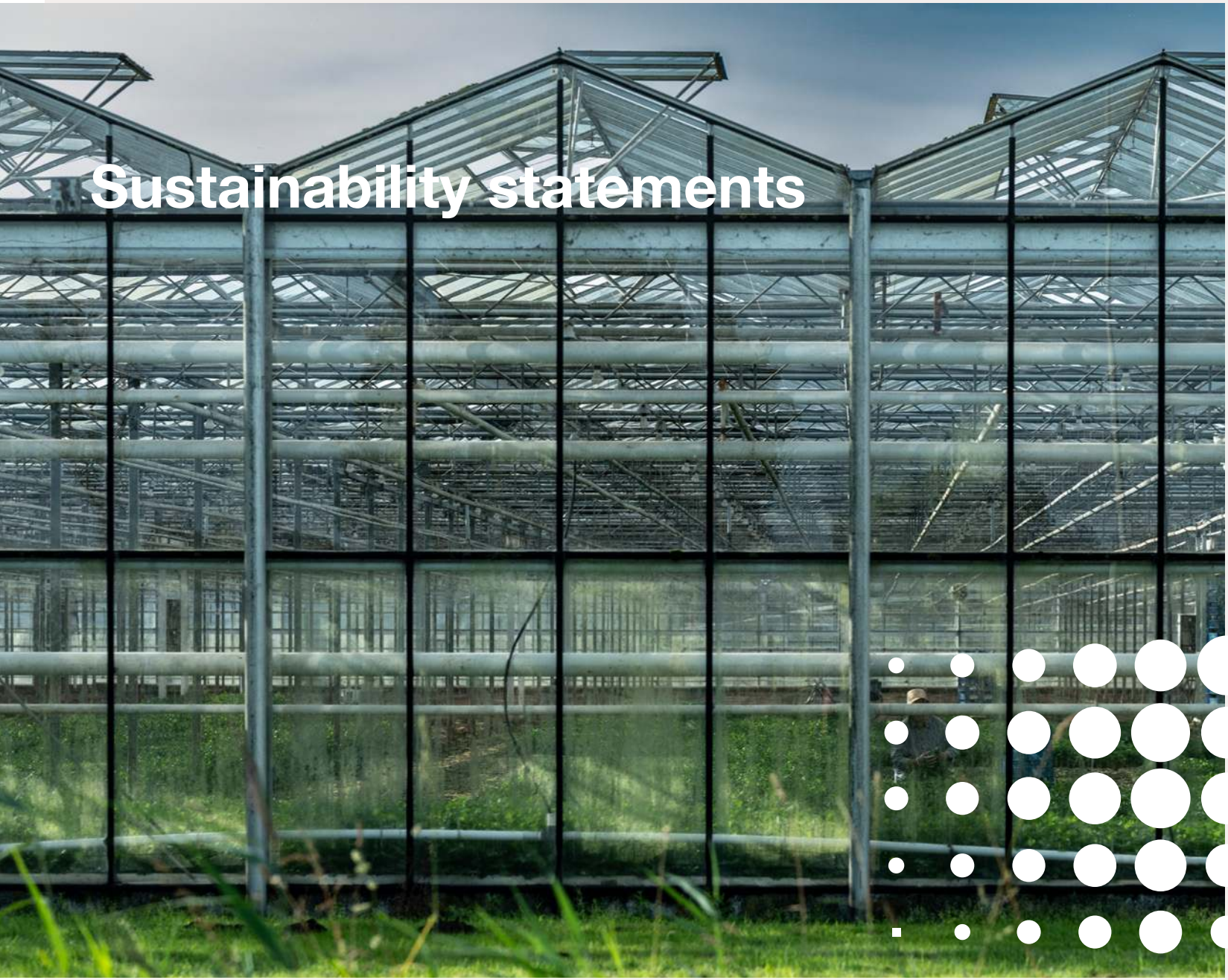
The total remuneration received by the Supervisory Board in their capacity as TenneT Holding B.V. Supervisory Board members during 2024 was as follows:

	2024			2023		
(in EUR thousand)	Fixed remuneration	Committee fee	**Total**	Fixed remuneration	Committee fee	**Total**
A.F. van der Touw	38	21	59	34	21	55
L.J. Griffith	-	-	-	28	6	34
E. Kairisto	31	15	46	25	21	46
A.C.C. van Els	28	13	41	25	13	38
E.M Schöne	28	16	44	25	14	39
K. Singh	28	8	36	9	3	12
M.R.P.M. Camps	28	10	38	9	2	11
Total	**181**	**83**	**264**	**155**	**80**	**235**

The Aufsichtsrat is a governance body for TenneT TSO GmbH; it is therefore not considered a committee of the Supervisory Board. Ms. Van Beek, CEO of TenneT Holding B.V. and (qualitate qua) chair of the Aufsichtsrat, waived the remuneration for both 2023 and 2024. There were in 2024 no Supervisory Board members also member of the Aufsichtsrat (2023: one member amounting to EUR 15 thousand).

Each Supervisory Board member received an allowance for necessary out-of-pocket expenses, of 10% of the total remuneration. This allowance is not included in the remuneration table as it is a compensation for expenses incurred and hence not considered a remuneration component.

Sustainability statements



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General

With the help and support of many colleagues within TenneT, we are humbled and proud to have been able to present to you our first Integrated Annual Report (IAR) based on the European Sustainability Reporting Standards (ESRS) to comply to the Corporate Sustainability Reporting Directive (CSRD), which TenneT is obliged to meet as one of the first companies that are required to report in light of these new reporting standards.

We acknowledge that as CSRD has not formally been adopted in some member states, including the Netherlands, we have continued to voluntarily apply these ESRS standards in anticipation of this legislation to be finalised. While we prepared these statements based on the first set of ESRS, we acknowledge that the application of these standards might evolve over time as new insights and updated understanding of the requirements might be developed, e.g. through new Q&As made available by the European Financial Reporting Advisory Group (EFRAG) and in alignment between companies that have reported in this first wave of ESRS reporters. This will help evolve reporting in accordance with ESRS and provide improved insights for stakeholders over time.

We are at the fortunate circumstance that TenneT has been reporting on non-financial information for the past decade. However, at the same time, we acknowledge the impressive work performed by the EFRAG and many others in developing the ESRS standards, which also required companies with experience with sustainability reporting to further improve and provide more insights. With the knowledge obtained in the journey to prepare our first ESRS based IAR, we acknowledge that this journey has helped us further sharpen our reporting practices and also to identify areas for improvement. Although we are not at the end of this reporting journey, we consider the preparation and publication of IAR 2024 to be a significant milestone, which we have been able to deliver with the help of many colleagues from almost every unit in our company. We will continue working on further improving and sharpening data collection processes, definitions and the way we are able to steer on these material impacts. This will help us in further improving our sustainability performance. Despite all these efforts to develop and report the requirements set forth in the ESRS standards, we acknowledge that our processes and methodologies to estimate and measure our performance is continuously evolving and improving, and therefore inherently not having 100% accurate and complete insights and information within a reporting year is an inherent consequence of this.

In addition, this report is based on a first time preparation of the double materiality assessment (DMA). We consider this analysis to be a starting point as well, as we expect that over time new insights will develop, and differences in the outcomes of the DMA compared to this first version might apply. We will conduct a full DMA every two to three years and reassess the outcomes of the most recent DMA in the years in between to ensure we have collected recent insights into our material impacts, risks and opportunities (IROs). This approach also creates consistency and stability with respect to managing our IROs and the development in how we manage these more appropriately where applicable.

Basis for preparation

Consolidation

The sustainability statements have been prepared on a consolidated basis. The scope of this report is TenneT Holding B.V. and the subsidiaries in which it has a controlling interest. Joint ventures and associates are not included in the sustainability statements as we do not have operational control over these entities. They have been considered as part of the IRO identification in the DMA. In line with financial reporting, TenneT Holding B.V. started to include non-regulated subsidiaries, which business activities differ from the core operations of the group in its sustainability statements. However, they currently still adhere to their own distinct policies and manage operations in accordance with their guidelines. Consequently, when referring to policies and actions that apply across the entire group, these exclude NOVEC B.V. and Relined B.V. as they have their own policies and are not within the scope of our policies. However, performance metrics for both subsidiaries have been included within the reporting scope in relation to topics deemed material to their operations. For reference purposes, the relative share of these non-regulated activities compared to the overall Holding results were 0.2% and 0.2% of the 2024 IFRS revenue, 0.9% and 0.7% of the Group FTE figures.

The sustainability statements are prepared alongside the Environmental, Social and Governance topics that are

identified based on the DMA, to disclose how ESRS 2 and topical standards have been applied. The information included in this report is not limited to our organisational boundaries:

- In the Environmental domain, value chain information (upstream), related to climate (like our Scope 3 emissions) is included and also resource use and circularity, as we include information on the material used in the assets that contractors build on our behalf and the waste that is produced.
- Regarding the Social domain, our scope also includes upstream value chain information, as with respect to human rights (of which we have identified health and safety separately as a material topic) workers in the value chain have been included in reporting on these topics.
- No Governance impacts were deemed material. There are elements of human rights that also have certain overlap with Governance, such as grievance mechanisms, however these are covered in the Social domain as this is made specific to workers in the value chain.

As a company, we aim to inform our stakeholders in a clear and transparent manner. However, we have made use of the option to omit information in rare occasions. For instance if this is sensitive information with respect to innovation.

Due to ESRS requirements, which we applied for the first time in 2024, metrics needed to be adapted accordingly. For the details, please see hereafter.

Use of estimations

In certain areas, for both the Environmental and Social domain, we make use of (value chain) estimations. Examples include estimating the impact on our carbon footprint regarding our employee commuting in Germany, due to data privacy regulation, or estimation on hours worked with respect to the contractors executing our projects. These estimations, as well as sources of estimation and outcome uncertainty are reported alongside the metrics disclosures in the sustainability statements.

Changes in preparation or presentation of sustainability statements (e.g. due to prior year's errors)

We have not identified errors in prior year's reporting. We do have changes in the presentation of our sustainability statements, next to the fact that this is the first year we are reporting based on the ESRS standards. With respect to the definition of the Total Recordable Incident Rate (TRIR), there has been an updated definition which causes changes in the presentation / outcome of the TRIR. We have refined the methodology of our scope 3 GHG emissions compared to the methodology applied in our baseline and target. We refer to the respective metrics paragraphs in the Social and Environmental chapters for a description of the change. In preparing information included in the sustainability statements, we also make use of third party information (e.g. for the scope 3 emission and waste reporting).

Governance

General

The role of the administrative, management and supervisory bodies and the information provided to and sustainability matters addressed by the undertaking's administrative, management and supervisory bodies are described in the Governance section of the Sustainability statements and in the Supervisory Board report for the Supervisory Board. TenneT does not have variable remuneration and as such, sustainability-related performance and climate-related considerations are not included in the incentive schemes. Despite the board not having a variable remuneration scheme, their performance is assessed by the Remuneration and Appointment Committee on all strategic pillars over the year 2024. The majority of the impacts identified in our DMA are also part of the former strategic pillars and our Executive Board is assessed against their performance regarding these areas.

Statement on due diligence

How our due diligence process works at TenneT, is described in several sections of our sustainability statements. Hereafter we have included an overview per topic where we have described the several core elements of due diligence per material topic.

Risk management and internal controls over sustainability reporting

Reference is made to the Risk Management section.

Strategy

Strategy, business model and value chain

TenneT's core tasks and how we create value is included in the How we create value section in this report. No new products or services are offered as of this year. The same applies for the significant markets and/or customer groups served. The headcount per area we serve is included in the Social part of the sustainability statements. The breakdown of

Core elements of due diligence	Section	Pages
How it is embedded in governance, strategy and business model	General, Governance,	129, 130 ,173
How we engaged with affected stakeholders	General, Social, Governance	129, 162, 173
How we identified and assessed negative impacts on people and the environment	General, Environment, Social, Governance	129, 136, 162, 173
How we took action to address negative impacts on people and the environment	Environment, Social	129, 162
How we track effectiveness of these efforts and communicate	Environment, Social	129, 162

our total revenue can be found in the financial statements in note 24.

Our strategy, business model and value chain is described and depicted in the Our strategy section of the Executive Board Report. Here, our sharpened strategy, and the strategic goal to deliver grid capacity in time for customers, has been introduced. To achieve our goal, the three strategic focus areas of 'Building the grid faster', 'Deliver together for customers' and 'Utilising the grid better' were presented. To meet this goal, boundary conditions are set regarding safety, quality, sustainability, financial health and security of supply. Our sustainability matters are as follows related to the elements of our strategy:

- The sustainability matter 'Delivering the energy transition' is related to the focus area 'Build the grid faster'. For 'Delivering the energy transition' metrics and targets are defined related to the total investments, number of connections realised, connection requests and output KPIs regarding the number of kilometres lines and cables and GWs offshore grid capacity.
- The social sustainability matter of 'Security of supply' (e.g. the negative impacts when we are unable to connect customers) relates to both 'Utilising the grid better' and 'Building the grid faster'. The group metrics and targets of 'Security of supply' relates to grid availability and outage reporting.
- As there is a focus on people growth and core competences to 'work together for end-to-end output', the impact on our own workforce in the social domain is a sustainability matter. The topic of 'Good employment' is related to 'Delivering together for customers'. 'Good employment' contains the goals related to diverse workforce and an engaged workforce.
- Sustainability matters 'Safe working environment', 'Climate change' and partly 'Security of supply', are related to the boundary conditions in our strategy. The group metric and target regarding 'Safe working environment' is the TRIR. Environmental goals have been defined as the sustainability performance (corporate carbon footprint). For 'Security of supply' group metrics and targets are defined and relate to the availability of our grid.

The sustainability matters 'Resource use and circularity' and 'Responsible Supply Chain Practices (Human Rights)' are mentioned as boundary conditions (within sustainability) in the corporate strategy, and are partly steered on corporate level via group KPIs.

Interests and views of stakeholders

How we interact, engage and consider the interests and views of stakeholders is included in the Our stakeholders section. In addition, the interests, views and rights of stakeholders, such as our own workforce including human rights and value chain workers, is safeguarded by our business processes and engagement, such as set out in our Social section of the sustainability statements. For instance, the way our works councils (the Dutch 'Ondernemingsraad' and German 'Betriebsrat') are engaged with regard to our sharpened strategy, and the views of value chain workers are collected by our Strategy and Partnerships unit, which has also been the lead to update our strategy.

Double materiality assessment

Introduction

In preparation of our Integrated Annual Report 2024, we conducted a double materiality assessment (DMA) in 2023, in accordance with the requirements from the European Sustainability Reporting Standards. An update was performed in 2024, resulting into a slightly changed DMA which was approved by the Executive Board in November 2024.

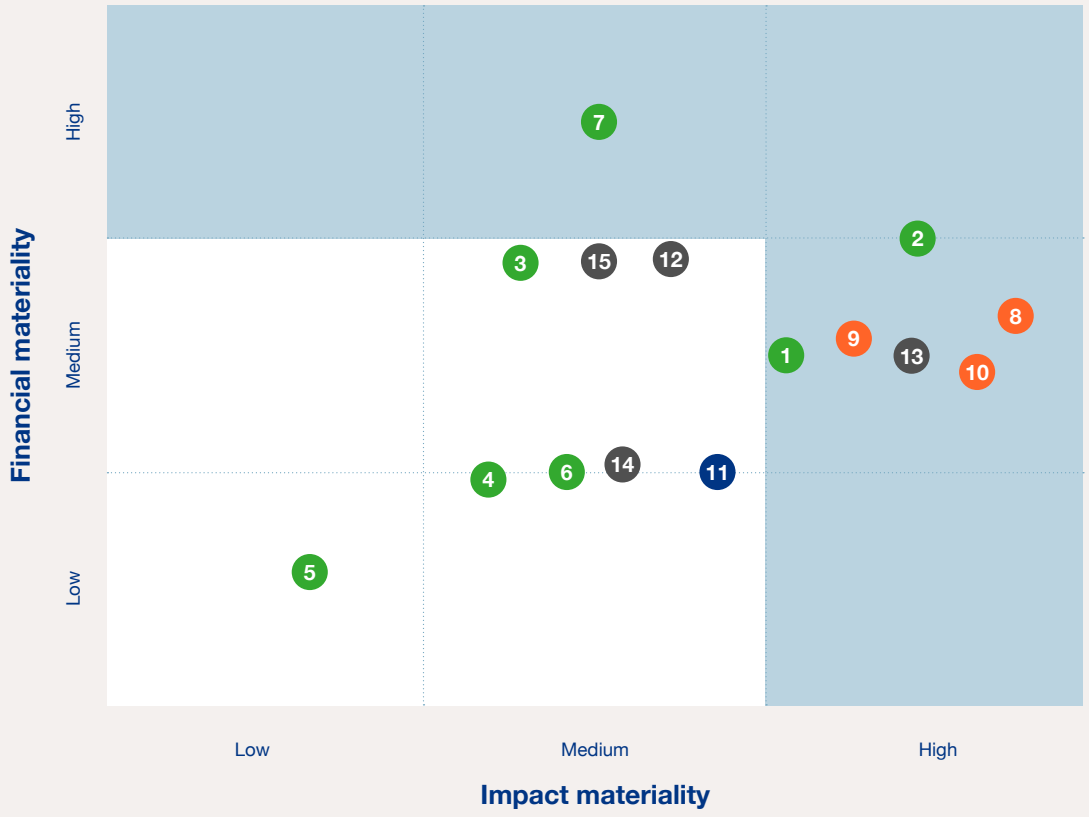
Through the DMA we determined the materiality of topics, regarding their impacts, risks, and opportunities (IROs). A sustainability matter can be material from both an impact perspective, as well as from a financial perspective or both. For each material matter, we report on how we manage the corresponding IROs. On the right-hand side, a visualisation of the IROs and the corresponding sustainability matters is disclosed.

Methodology

Understanding the context

As advised in the EFRAG Materiality Assessment Implementation Guidance, it starts with the step of "Understanding the context" and bearing in mind the elements described in the respective IRO-1 considerations such as our business activities and relationships, the context in which they take place, the environment we are operating in as well as the interests and views of our stakeholders. We have performed the assessment for our own operations for the entire consolidated group, which focuses on the Netherlands and Germany. IROs on the part of our value chain related to transmission of electricity, as well as our upstream and downstream value chain, were taken into account. A visualisation of our value chain is disclosed in the Value chain and impacts section.

As a second step, we identified our actual and potential IROs related to sustainability matters.



Material topics

1. Climate change (E1)
2. Delivering the energy transition (E1)
3. Pollution of air (E2)
4. Pollution of soil (E2)
5. Water management & water pollution (E3)
6. Biodiversity (E4)
7. Resource use and circularity (E5)
8. Good employment (S1)
9. Safe working environment (S1)
10. Responsible supply chain practices (S2)
11. Compliance (G1)
12. Safe and reliable infrastructure (ES)
13. Security of supply (ES)
14. Stakeholder engagement (ES)
15. Supplier relations (ES)

Non material | **Material** | **Environment** | **Social** | **Governance** | **Entity Specific**

Impact materiality

Identification of impacts

In the past years materiality assessments were conducted according to guidance provided by GRI in their Universal Standards. The assessment of our impact on economy, society and environment, which was reviewed and validated by both our Executive Board and Supervisory Board, served as a basis for our latest DMA. This basis was extended by the outcomes of TenneT's due diligence process and several additional analyses to broaden the overview of the (potential) impacts, including for example a review of the topics provided by ESRS 1, AR 16, a review of peers and a media analysis. We have performed a screening of our activities considering potential GHG emission sources that are categorised in the Greenhouse Gas Protocol. Before engaging with a wider group of internal stakeholders, a short-list of relevant topics with the corresponding impacts was created to analyse and assess the impacts of TenneT. Related to the topic circular economy, we identified a selection of key materials and assets for TenneT in the development of our Circular Economy Strategy based on criteria such as current cost impacts, future material demand, historic price volatility and environmental and climate impact. A focus was set on workshops with key stakeholders; affected communities were not specifically consulted.

Assessment of impacts

After drafting the list of potential and actual negative and positive impacts, we assessed the materiality of these impacts on the environment or people in the short, medium or long-term. This is determined by assessing the severity of impacts, and for potential impacts also the likelihood is considered. For actual impacts, the severity is based on the scale, scope and irremediable character for negative impacts.

We conducted a workshop with internal colleagues from the units Audit, Risk and Compliance (ARC), Business Guidance (BGD), Financial Governance and Services (FGS), where the Integrated Reporting team was involved due to their involvement in ESG reporting, and Strategy and Partnerships (STP), as they are responsible for the Sustainability strategy. These units validated the impacts through combined knowledge across the company. Furthermore, we conducted a stakeholder survey with the involvement of our key stakeholder groups. The questionnaire provided insights on the significance of TenneT's impacts for affected stakeholders. Additional external experts were not consulted.

The severity, likelihood and irredeemability of an impact were assessed from low to high, applying qualitative thresholds. Potential impacts with a high severity, likelihood and irredeemability were deemed material, as well as actual impacts with a high severity and high irredeemability. When determining a severity of medium/high, our stakeholder perspectives had the deciding vote.

Financial materiality

Identification of risks and opportunities

The identified impacts served as a basis to determine risks and opportunities over the short, medium or long-term. To determine the financial materiality, the above-mentioned units, including our risk department, identified the risks and opportunities per sustainability matter. Prior materiality assessments according to GRI were focused on impact materiality and therefore needed to be extended by the financial materiality perspective. We specifically considered climate-related risks and opportunities, such as the effect extreme weather events have on our assets in the short, medium and long-term under a range of climate scenarios and climate-related transition risks and opportunities, including the transition our business activities need to go through in a scenario where global warming is limited to 1,5°C. Risks can be identified from either a gross, or a net perspective and the ESRS aims for gross. Specific guidance on this has become available during 2024, which will help us in our next materiality analysis planned for 2025, to specifically mention this. However, our expectation is that this element will not impact our assessment and will not lead to additional material topics.

Assessment of risks and opportunities

Per topic, we have ranked whether the identified risks and opportunities are likely to occur and the potential magnitude of it. Likelihood was ranked from rare to frequent, while the magnitude was ranked from very low to extreme, both in a five-point scale. For the DMA we conducted, a risk-assessment additionally to the general risks identified in the risk management process. ESG risks in general are part of the risk process and were used as input factors, but deeper integration is sought.

In addition, to determine how to weigh and determine these IROs, the respective IRO-1 considerations have been part of the collective knowledge that was used in assessing this during meetings held in this respect. This has led to the outcome of certain sustainability matters deemed to be material and other that have deemed to be less material.

Validation of the outcomes

The final step in the double materiality assessment was to discuss the outcomes, including the stakeholder survey, with our Executive Board and Supervisory Board and have it validated by them. This has resulted in the final overview on topics which are considered material from an impact and/or financial materiality perspective.

Material IROs

Environmental impacts

Sustainability matter	Type of impact	Impact description	Value chain position	Time-horizon
Climate change mitigation	Actual negative	Through our daily operations, we have an inevitable impact on the environment around us, including on carbon emissions. Our most significant emissions relate to SF_6 leakages, grid losses and energy use, and emissions from purchasing materials and products (scope 3).	Upstream, own operations	Short-term, medium-term and long-term
Delivering the energy transition	Actual positive	With our onshore and offshore project portfolio we build the assets needed for society's future energy needs and help achieve climate goals of the governments in the areas we serve. TenneT helps delivering the energy transition by being a thought leader, developing innovative instruments that unlock flexibility and establish a pivotal role in the energy data world.	Own operations	Long-term
Resource use and circularity	Actual negative	In the own operations, TenneT procures assets that require, large amounts of different materials with a majority made of virgin materials, which in turn contributes to resource depletion and negatively affects resource efficiency.	Upstream, Own operations	Long-term
	Potential negative	TenneT has a potential negative impact on waste. In the own operations the construction of new assets and as well as the decommissioning of assets and the subsequent disposal of end-of-life equipment partially leads to hazardous waste as well as significant amounts of general waste, which can have a negative impact on the environment if it is not disposed of properly.	Downstream	Short-term, medium-term and long-term

Environmental risks and opportunities

Sustainability matter	Risk / opportunity description	Value chain position	Time horizon	Current financial effects on financial position, financial performance, and cash flows
Resource use and circularity	To build our projects, we depend on materials such as aluminium, steel or virgin copper. Materials such as virgin copper is becoming increasingly scarce, and while we aim to reduce our impact through circularity, the availability of it (or other resources) is limited. It could lead to the situation that TenneT would be required to procure resources that would induce a lowered sustainable impact. To partially mitigate the unavailability of resources, we pursue the recycling of key materials so they can be re-used for our assets. These efforts concern copper, steel and oil in particular.	Upstream	Long-term	There is no significant risk of a material adjustment within the next annual reporting period to the carrying amounts of assets and liabilities reported in the related financial statements identified, for that reason there is no current financial effect.
	TenneT faces a strong sellers' market that affects the price, price volatility and availability of circular materials and resources that we need to build our projects in a sustainable manner. We could be faced that we need to procure against a much higher price than initially projected. While we have raised our circularity requirements in applicable tenders, however in a seller's market with scarce materials, it could further increase the expected cost.	Upstream	Long-term	There is no significant risk of a material adjustment within the next annual reporting period to the carrying amounts of assets and liabilities reported in the related financial statements identified, for that reason there is no current financial effect.
Delivering the energy transition	As a key player in the energy landscape, we have the opportunity to support the delivery on the energy transition. With the decades of knowledge and experience gained and the opportunity we have to connect more renewable electricity to our grid to unlock the potential of the North Sea as Europe's green electricity powerhouse, we are working hard to make our electricity grid future-proof and build towards the design of our grid we envision in our Target Grid.	Upstream, own operations	Short-term, medium-term and long-term	The financial effect to deliver the energy transition is disclosed in our management board report. On the short term, we have annual investment costs, which amounted to 10.6 EUR billion. In the medium and long term, we expect to invest around 200 EUR billion in the next ten years.

Transitional provisions

TenneT makes use of transitional provision to omit comparative figures in the first year of reporting. Performance indicators that we have published in previous integrated annual reports have been presented with our performance in the prior year(s). We have not included comparative figures for metrics that are published for the first time. Further, we apply the transitional provision to phase-in specific disclosure requirements. For that reason the anticipated financial effects of material risks and opportunities on its financial position, financial performance and cash flows over the short-, medium- and long-term, including the reasonably expected time horizons for those effects is not disclosed. We have applied the transitional provision related to the value chain for our disclosures regarding workers in the value chain. Refer to the Social chapter for a description where we explain our efforts to obtain the necessary information. In absence of ESRS sector-specific standards on the Energy utilities sector, the sustainability matter 'Security of Supply' is considered an entity-specific disclosure, although we apply the GRI G4 standards for the Energy utilities sector.

Social impacts

Sustainability matter	Type of impact	Impact description	Value chain position	Time-horizon
Safe working environment	Actual negative	TenneT has more than 9,600 employees and contractors, many of which are involved in high-risk activities during the construction, maintenance or decommissioning of our grid.	Upstream, Own operations	Short-term, medium-term and long-term
Responsible supply chain practices	Potential negative	Considering that our construction sites and supply chain are globalised, TenneT has a potential negative impact on human rights. For our activities in building the grid to support the energy transition we use contractors to realise construct and maintain our assets, and they in turn make use of sub-contractors that operate in a variety of countries.	Upstream	Medium-term, long-term
Security of supply	Actual positive	By maintaining, operating, designing and building the grid, TenneT ensures the secure supply of electricity to its customers. This means maintaining the grid to meet reliability targets, operating it to its maximum capability to keep our license to operate and connecting new customers to the grid.	Own operations	Short-term, medium-term and long-term
Good employment	Actual positive	More than 8,300 people are working for TenneT for which we have a responsibility as an employer. To realise our Target Grid, we work to ensure that we recruit and retain the talent we need to meet our growth objectives. Our people are our most important asset, and we are committed to providing an environment in which they can thrive. TenneT must foster an inclusive and diverse workforce to ensure that different perspectives and ideas contribute to the energy transition.	Own operations	Short-term, medium-term and long-term

Social risks and opportunities

Sustainability matter	Risk / opportunity description	Value chain position	Time horizon	Current financial effects on financial position, financial performance, and cash flows
Good employment	To drive the energy transition and to be able to deliver on a future-proof electricity grid that supports Europe's goal to become the first climate-neutral continent by 2050 requires a significant amount of people working together to achieve this. Therefore, TenneT must ensure its attractiveness as an employer of choice as well as ensuring that the sector as a whole is able to attract sufficient staff to realise the energy transition. This requires us to not only focus on people living in the areas we serve, but also to be able to attract and retain talent from other parts of the world.	Upstream, own operations, downstream	**Medium-term and long-term**	On short, medium and long-term, requiring more staff will lead to higher cost to employ our workforce. Other initiatives to meet our strategic goals in this area have a lower financial effect and are less significant than the increase of these employee costs.

Environmental

TenneT has a clear impact with respect to the environmental domain: an actual positive impact on the topic of climate change mitigation and a negative impact with respect to our own carbon footprint and the use of resources to build and maintain our assets. In the value chain TenneT enables a switch to a climate-neutral economy by connecting renewable energy sources to the grid and transmitting the produced electricity by increasing the grid capacity such that more households and businesses have access to green energy and we meet societal demands, and save greenhouse gas emissions. We do this by using our Target Grid, our vision of a climate-neutral energy system for 2045, from which our corporate strategy defines the relevant priorities. The Target Grid should serve as the backbone of a future-proof energy landscape. We aim to reduce our impact on the natural environment and the materials we need to build, operate and maintain our grid.

Performance tables - environmental topics

	2024			2023			% 2024/2023
	DE	NL	Total	DE	NL	Total	
Total gross scope 1 GHG emissions (tCO_2eq)	5,522	23,127	28,649	5,298	16,204	21,502	133%
Total gross market-based Scope 2 GHG emissions (tCO_2eq)	180,421	304	180,725	2,307,990	368	2,308,358	8%
Total gross location-based Scope 2 GHG emissions (tCO_2eq)	1,513,544	699,845	2,213,389	1,838,594	731,932	2,570,526	86%
Total significant scope 3 GHG emissions (tCO_2eq)	1,391,618	1,068,524	2,460,142	671,132	376,744	1,047,876	235%
Total GHG emissions market based (tCO_2eq)	**1,577,561**	**1,091,955**	**2,669,516**	**2,984,420**	**393,316**	**3,377,736**	79%
Total GHG emissions location based (tCO_2eq)	**2,910,684**	**1,791,496**	**4,702,180**	**2,515,024**	**1,124,880**	**3,639,904**	129%

Governance

The way TenneT governs environmental IROs is described in the General section of the sustainability statements. For the topics regarding E1 Climate change and E5 Resource use and circular economy, the overall accountability resides at our Executive Board. For each topic, the Executive Board delegated accountability to the directors of TenneT's units. This ensures that the right policies and actions are carried out in alignment with strategic company objectives, and assigned to owners with responsibility for the results on these topics. For E1 Climate change, this relates to our Strategy and Partnerships (STP) unit, and on decarbonisation levers, the responsible units have been appointed. For E5 Resource use and circularity this also relates to our STP unit in close collaboration with our Supply Chain Management (SCM) unit and our Health, Safety and Environment (HSE) unit.

Strategy

The impact we have on the planet is twofold. TenneT's role in facilitating the decarbonisation of the European energy system as a grid operator is the most significant opportunity we have as a TSO, and aligns with the overall European ambition to become a climate-neutral society by 2050. On the other hand, we also have a negative impact on the planet as some of our activities emit CO_2 and other GHGs. We aim to reduce this, and to do so, we have set climate targets. Since 2021 these have been in line with the Science Based Targets initiative (SBTi) framework (we are not excluded from the EU Paris-aligned Benchmarks).

Following our double materiality assessment, we have not identified climate change adaptation and the related climate change risks and opportunities as material sustainability matters. Nevertheless, we continuously perform climate resilience analyses to assess the effect that extreme weather conditions under different climate scenarios might have on our current and future asset portfolio, taking into account the planned investments in our ten year investment plans. The results of these analyses are included in the designs of our investments.

Directly related, is the negative impact TenneT has through the use of resources for our activities. Price volatility and the inability of realising projects due to resource scarcity are particular risks. In the development of our Circular Economy Strategy, we identified a selection of the key materials and assets for TenneT based on criteria such as current cost impacts, future material demand, historic price volatility and environmental and climate impact. A focus was set on workshops with key stakeholders; affected communities were not consulted.

Impact, risk and opportunity management - Climate Change & Resource use and circularity

Policies

Our Climate Transition Plan acts as our policy to manage our material impacts, risks, and opportunities related to climate change mitigation. This is a roadmap that charts our commitment to a more sustainable and responsible energy future. The scope of the Climate Transition Plan covers own operations in the Netherlands and Germany, and the upstream and downstream value chain. The Climate Transition Plan outlines our policy to mitigate our potential negative impacts on climate due to our activities which are addressed in the sections hereafter as actions for every specific scope of emissions. It also addressed the potential risks we expect during our decarbonisation journey which includes a shortage of suppliers and our mitigation measures for addressing this risk. We are amidst the energy transition and the role of electricity will only increase in the upcoming decade, leading to an opportunity of accelerating the energy transition and fulfilling our role as a TSO through projects, such as the ones relate to the Target Grid.

The objective of the Climate Transition Plan is to outline our targets, actions and metrics which address our impact on the climate. Though facilitating the energy transition is our primary task as a TSO, this work comes with an adverse impact on the climate through the facilitation of building and maintaining the infrastructure required for the transition. Our Climate Transition Plan addresses our commitments to international targets, our shareholder requirements and our investor interests, collectively framed as our key stakeholders.

Our overall climate targets which are science-based address the topic of climate change mitigation across all scopes collectively. The Executive Board of TenneT is responsible for approving the climate strategy and monitoring the sustainable performance and progress of TenneT as described in the Climate Transition Plan. The Climate Transition Plan was approved by the Executive Board and Supervisory Board in 2024. To ensure internal alignment, several internal teams were consulted, such as SCM, Large Projects (LP) and Asset Management (AMT). Once the targets were set, TenneT's investors and shareholders were informed as well.

We have conducted a qualitative assessment on all relevant potential locked-in GHG emissions from our existing assets and planned investments. Our main locked-in emissions can be attributed to grid losses related to the grid infrastructure that needs to be expanded and maintained in the coming decades. The emissions related to our grid losses are depended on our ability to purchase renewable electricity through guarantees of origin (marked-based) and the national grid mix of the countries we operate in (location-based). Considering our decarbonisation-levers, these locked-in emissions do not jeopardise the achievement of our SBTi targets.

Regarding delivering the energy transition, the realisation in accordance with the Target Grid is a two-step approach. In the first design step the needs for grid developments, to ensure a secure and reliable electricity supply, are determined in collaboration with the respective regulators,

governments and key stakeholders to be set in the German Netzentwicklungsplan (NEP) and the Dutch Investment Plan (IP). In Germany, projects are thereby confirmed by law – the Bundesbedarfsplangesetz - and need to be executed by the TSOs.

Secondly, we execute projects to build or enhance the grid to realise Target Grid while maintaining our grid smartly through a structured and strategic approach. Policies are validated by the board and a broader set of key stakeholder interested in the policies, such as other TSOs, DSOs, the shareholders, national ministries, traders, academia, etc. We have regular audits for our asset management processes in the Netherlands, which is part of the process of determining the national Investment Plan. This results in a clear plan and in Germany even in legislation (Bundesbedarfsplangesetz) on what to build in the next years to meet these targets. In both countries, grid expansion to be able to make the grid future-proof and being able to integrate larger volumes of renewable electricity is a key area of focus in these investment plans. Next to grid expansions, the Dutch Investment Plan also entails a plan for reconstructions, customer connections, functionality and asset renewal.

When key projects have been defined and approved by the Future Design Committee, this is then shared with AMT for the selection of alternatives, and subsequently with LP and Grid Field Operations (GFO) for the execution part of delivering the energy transition. The Corporate Investment Manual describes the governance process of translating design into execution and linking the decisions of the Future Design Committee to the executing units.

To realise our Target Grid, our vision of a climate-neutral energy system for 2045, significant capital investments are required. Our capital investments thus focus on decarbonising the energy system and for each of our material emission categories there are actions we take where our transition plan influences our strategy and planning. Examples include investments into partnerships to develop alternatives to SF_6, using green energy in own buildings, buying Guarantees of Origin to cover our grid losses and a mobility policy to electrify of our fleet. Certain aspects of the Climate Transition Plan, such as the monetary limit for procuring market-based instruments to green our grid losses, are taken in our financial planning by imposing a threshold to guarantee our financial health. Similarly, CapEx investments, such as using alternatives to SF_6, are planned for during project investments when such technologies are available in the market. For OpEx decisions, such as the electrification of our fleet or increasing the energy efficiency in our substations and offices, we ensure that the financial planning is made every year based on our OpEx thresholds and maintaining affordable costs to society.

The Taxonomy-aligned activity relates to activity 4.9 'Transmission and distribution of electricity' (NACE code D35.12) within the Climate Change Mitigation section of the EU Taxonomy regulation. Included here are our activities to deliver a future-proof grid that supports the energy transition, which cover nearly 100% of our CapEx.

Closely related to our Climate Transition Plan, is our Circular Economy Strategy, as resource use is a key factor in our carbon footprint. TenneT's common understanding of the topic of resource use and circular economy and our main strategic ambitions are set out in our Circular Economy Strategy, which was adopted in 2023. In 2024, we moved into the implementation phase of this strategy. Our mission is to optimise the use of materials and reduce our dependency on virgin materials by embedding Circular Design, Circular Procurement and Circular Outflow in our activities, while expanding our grid to ensure a stable and renewable energy infrastructure connecting everyone with a brighter energy future. With this strategic objective, our strategy directly addresses all identified IROs for resource use and circular economy. Our Circular Economy Strategy is structured along three circular principles inspired by the Circular Transition Indicator (CTI) framework. These principles cover designing our assets with circularity in mind (Circular Design), making sure the inflow of materials needed for our products and services is circular (Circular Procurement), and recovering materials during construction, maintenance, and decommissioning (Circular Outflow). The strategy focuses on our key materials: steel, copper, aluminium, concrete, plastics, gravel, sand, porcelain, lead, insulating liquids, bentonite, and (only for outflow) soil. These have been identified as the most relevant materials to TenneT regarding volume and environmental impact. Furthermore, the following focus products were defined: Power transformers & shunt reactors, AC & DC cables (land & sea), latticed steel towers & coating, primary components (disconnectors & earthing switches), HDD, OHL construction, steel construction stations, civil works cables (AC & DC) & stations, sea cable installation, offshore platform jacket & topside, HVDC converter stations, and OHL conductors. The overall ambition of the Circular Procurement strategic pillar is to make our material inflow more circular. Therefore the strategy aims to directly steer on transitioning away from the use of virgin resources, mostly through increasing the relative share of secondary resources. Furthermore, the strategy is directly connected to sustainable sourcing and the use of renewable resources: the production of secondary materials is usually connected to more sustainable production processes and the use of higher shares of renewable energy, compared to primary materials. The Circular Economy Strategy covers TenneT's own activities as well as the upstream and downstream value chain in both Germany and the Netherlands, onshore and offshore. It mainly affects TenneT's suppliers and sub-suppliers, own employees and disposal/recovery contractors, but also society as a whole. The most senior level accountable for the implementation of the policy is the Executive Board with the director of Strategy and Partnerships being responsible. Our Circular Economy Strategy is shared internally via TenneT's

intranet and externally via e-mail with affected suppliers and contractors.

Inflow

Resource inflow relates to our aim to reduce our dependency on virgin materials. Our Supply Chain Management (SCM) department has an important role as the concept of 'circular procurement' is essential in achieving our strategic ambitions on this. The TenneT Sustainable Procurement Policy was adopted in December 2024, and defines how we aim to implement our sustainability ambitions into our procurement processes. As part of this, it specifically defines how we aim to implement resource use and circular economy into our procurement and thus builds upon our ambition to make our material inflow more circular. The policy formalises the overarching ambition to make our material inflow more circular and the specific target of reaching 40% circular inflow for copper in 2025. It also formalises a number of overarching actions and guidelines, which are aimed at making our sustainability practices more sustainable and, in particular, more circular. Also it defines the governance (roles and responsibilities) through a RACI table. It addresses our climate ambition and our scope 3 target, outlining concrete actions for reducing emissions and therefore directly addresses sustainable sourcing and the use of renewable resources throughout our procurement portfolio and all lifecycle stages. The scope of this policy refers to TenneT's procurement/ supply chain management across the complete portfolio in both Germany and the Netherlands, onshore and offshore. Its focus is on the upstream value chain, but own activities (e.g., installation and maintenance services) and the downstream value chain (e.g., dismantling and recovery/disposal services) are also included. Affected stakeholder groups include suppliers and sub-suppliers, TenneT employees and workers in the value chain as well as society as a whole. The most senior level accountable for the implementation of the policy is the Executive Board, with the director of Supply Chain Management being responsible. Our Sustainable Procurement Policy is published internally and made available to all affected internal stakeholders. Colleagues from SCM will be trained in several aspects of this policy.

Outflow

In 2024, the Functional Directive Waste Management was introduced at TenneT. This defines mandatory requirements to ensure compliance with waste regulations, and to ensure the efficient and environmentally responsible handling, disposal, reduction, and recovery (through reuse and recycling) of waste generated by TenneT's operations. Its objective is to establish a comprehensive and sustainable waste management framework for TenneT's premises and activities. The top priority is reducing waste through preventive measures, emphasising a proactive approach in line with TenneT's Circular Economy Strategy, to address all necessary aspects of waste management and the circular economy. This also aligns with our environmental ambition, to operate within planetary boundaries, and goes hand in hand with our commitment, as outlined in our HSE Policy, to minimise the environmental impact of our operations. Beyond environmental regulatory compliance, TenneT has committed to setting up an environmental management system as part of the HSE management system (ISO 45001 & 14001). This directive applies to all departments, employees, contractors and sub-contractors, and facilities operated by TenneT and covers the entire lifecycle of waste from generation through to reuse, recycling, or final disposal. The document is accessible to all TenneT employees through the intranet.

The most senior person accountable for the implementation of the policy is the director of Health, Safety and Environment. The document will be accessible to all TenneT employees through the HSE management system page on the intranet. For 2024, we did not have sufficient insights into outflow data in order to already set clear targets and actions. Clear roles and responsibilities are outlined in this directive, and with the waste data obtained, we will set targets and define action plans. 2024 will serve as the baseline year for target setting as it is the first year with full TenneT scope data collection and reporting.

Actions

In order to reduce TenneT's carbon footprint, several GHG decarbonisation levers have been identified for scope 1, 2 and 3. For each scope of our emissions, we have a series of climate mitigation actions clustered under the decarbonisation levers. The actions focus on limiting our climate emissions, thereby helping us achieve the objectives and targets of our Climate Transition Plan. Information related to GHG emissions reduced is reported hereafter. The expected reductions per decarbonisation lever towards the near-term target is not available within TenneT.

For TenneT, the implementation of climate change mitigation actions depends on financial capital, market developments and technological feasibility. Many of these actions require significant investments, often amounting to millions of euros, while balancing societal affordability. Consequently, we implement these actions incrementally rather than on a large scale. For example, our strategic SF_6 policy addresses current market trends and the innovation required for alternatives to scale up. In some cases, such as the 150 kV GIS switchgear, no alternatives exist, and we collaborate with suppliers to develop solutions through innovative partnerships. Our sustainability performance is linked to our rotating credit facility and our term facility, thus relates directly to the allocation of resources to implement the actions. The access to finance at affordable cost supports our financial health and enables us to participate in these innovative partnerships.

Our main scope 1, 2 and 3 impacts and actions are explained in the following paragraphs. Thereafter, is a summarising table. Information related to the GHG emissions reduced and expected to reduce per action is available to very limited extend within TenneT. Moreover, the significant monetary

amounts of CapEx and OpEx that are required to implement the identified actions for environmental topics, including the current and future financial resources allocated to the action plan per action, are not in place as of 31 December 2024. TenneT is working on a solution and has the aim to have both topics formalised in the course of 2025 and will report on it accordingly in our Integrated Annual Report 2025.

Scope 1

Our main scope 1 GHG emissions, relating to GHG emissions from assets that are owned or controlled by TenneT, are those resulting from SF_6 leakages, mobility and gas usage (in offices and stations). The EU ETS trading scheme is not applicable to TenneT as TSO.

Use of alternative insulation gas:

Our scope 1 GHG emissions include the emissions associated with sulphur hexafluoride (SF_6), a gas classified as a potent greenhouse gas with a global warming potential of around 24,300 times that of CO_2. SF_6 has been, and largely continues to be, the ideal insulation gas for high-voltage and extra high-voltage electricity equipment. This remains essential for operations where safety and reliability of the grid are fundamental to guaranteeing security of supply. With the use of alternative insulation gases that are currently available for certain voltage levels in the market, we commit to have at least two-thirds of the newly installed assets to be SF_6 free by 2030. These categories of assets include instrument transformers, circuit breakers and gas insulated metal enclosed switchgear (GIS), which make up the majority of our SF_6 banked assets. By having alternative gases in our asset base, we aim to reduce the amount of banked SF_6 in our assets, thereby tackling the fundamental issues of having banked volumes of this gas which is prone for leakages over a period of 50 years. In 2024 we managed to reduce the banked SF_6 in our assets with 51.000 kg to 443.670 kg. With an average leakage rate in 2024 of 0.19%, this reduction in banked SF_6 has saved 2.346 tCO_2eq.

In addition to this action in the near term of replacing the assets with alternative technology, we engage in innovative partnerships with our suppliers to develop alternative technologies for a particular use case. The resources allocated to this are funded by our innovation portfolio. For instance in 2024, we developed the technical requirements for a 420 kV H-GIS alternative with two of our suppliers.

Ont top of the action on reducing our banked volume of this gas, we focus on actions such as preventive maintenance and leakage detection mechanisms on the long-term to limit the leakage of our ageing SF_6 assets. Our assets remain in service throughout the lifetime which varies due to regulatory and legal limits. Though the banked volume of SF_6 remains in the asset and is prone to leakage after a certain period of usage, the assets are replaced with new ones when they no longer can guarantee security of supply and reliability. In 2024 we launched a new initiative to resolve complex leakages by using non-invasive solution that allow us to treat the leakage withough dismantling the installation. The resources allocated to maintaining the leakage rate of our assets are funded through our OpEx investments and are evaluated based on a risk-based health index.

Electrification:

As an action pursuant to our decarbonisation lever of 'Electrification', we have chosen to move to a diesel-free fleet in 2024 in the Netherlands. We aim to move to a fully electrical fleet in 2025, with an exception to our on-call crisis fleet. This fleet caters to our security of supply and will still remain to ensure timely and prompt response to guarantee reliability of the grid. The resources allocated to this action are sourced from our yearly OpEx allocation.

The challenge of switching completely to an electrical fleet remains due to the unavailability of wide scale charging facilities in our substations and at a national level in the geographies we operate. In order to tackle this, as a near-term action under 'Electrification', we resort to the action of installing charging stations at our substations and offices. Our fleet currently consist for 40% of fully electrical vehicles.

Energy efficiency:

In line with our science-based targets, we aim to reduce emissions from natural gas consumption as much as possible. Our office spaces are leased and contracted, and the procurement of energy for use is monitored under a regulatory landscape. We therefore have limited flexibility in choosing our suppliers in this category. An action we undertake on the near term is to limit the emissions from this gas is by procuring green gas contracts where possible and purchasing guarantees of origin if green gas contracts are not an option. We offset the emissions from gas consumption of our offices in the Netherlands through the purchase of carbon credits. The resources allocated for this action are sourced from our yearly OpEx allocation. On the long-term, we resort to standardising our technical requirements to ensure energy efficient design for our substations categorised in our energy efficiency lever.

Scope 2

Our main categories of scope 2, the indirect GHG emissions from purchasing electricity, heating or cooling, are the energy losses from our lines and cable, and electricity used in offices and stations. The decarbonisation levers for this category predominantly include renewable energy deployment, energy efficiency and use of market-based instruments for renewable energy. With the actions clustered under these levers, we foresee to reduce our scope 2 emissions in line with our targets until 2030.

Use of market-based instruments for renewable energy:

Grid losses or electricity losses occur when power is being transmitted across transmission and distribution systems. They are measured as the difference between electricity fed into the grid and electricity delivered. They depend on things

such as the current, voltage and distance that electricity is transmitted over, and they are – to a certain extent – inevitable during electricity transmission. To compensate for these energy losses, we purchase a significant amount of electricity.

Because of the energy transition and the increased electrification of society, more electricity is transmitted, and the corresponding grid losses are expected to increase proportionally as well. Eventually, when more renewables are connected to the grid, the environmental impact of grid losses would significantly go down. Assuming that the grid mix consists fully out of renewables, the environmental impact is approximately zero. We are still in the midst of the energy transition. We aim to stimulate the generation of renewable energy and therefore purchase Guarantees of Origin (GoO) to green the impact of our grid losses.

Our action for the near term is to continue doing so and at the same time also optimise our grid design to minimise losses. The resource allocated to this action is set as a monetary limit for our German operations at EUR 2 million and for our Dutch operations no limit is predefined and costs are part of OpEx.

In 2024, we did this for 100% of our Dutch and 87% of our German grid losses. The monetary limit on the German part was imposed to ensure a balance between our financial health, our Climate goals and affordability to society.

Renewable energy deployment:
Electricity use in our offices and (sub) stations relates, as the name suggests, to the electricity procured and used in and around our offices and (sub) stations. This electricity is used, for example, for keeping our onshore and offshore (sub) stations operational. Electricity use in offices relates to the use of electricity for lighting, cooling and other purposes within our office locations. These locations are situated in the Netherlands (mainly in Arnhem, Gouda, Hoogeveen and Weert, as well as project locations) and in Germany (mainly in Bayreuth and Lehrte, and project locations).

One of the predominant actions under renewable energy deployment is the installation of solar panels on our substations. However, this action is not standardised and decided on a case-case basis due to the limitations of the EU unbundling act and the role of a transmission system operator. We therefore implement this action on a scale where the generation does not exceed consumption in the Netherlands. In Germany there are federal regulations that make it mandatory for commercial buildings to have solar panels. The resources allocated for the installation are assigned as a part of the project CapEx costs.

In addition to this action, we only procure renewable energy for our substations and offices where the regulation and laws allow us the flexibility to choose specific suppliers. This action therefore applies to the Netherlands. The resources allocated to this action are funded through our OpEx costs.

To optimise the use of electricity, we also resort to actions on energy efficiency and choose LED lighting for the lighting installations in our new substations which is a standard requirement for our substations.

Every year we identify some short-term actions to improve our energy efficiency on substation equipment such as replacing old transformers with new ones, identifying energy intense switching installations and including their replacement in our maintenance plans etc. These actions are also identified on a case-case basis every year and the corresponding actions are inventorised as improvement measures in line with our energy audit certifications.

Scope 3
Our main scope 3 emissions – those resulting from our activities in the value chain – relate to our purchased goods and services and capital goods and are a result of our (upstream) supply chain practices.

Incentivisation and supply chain engagement:
In order to facilitate the energy transition by building, operating and maintaining the transmission grid of the future, it is necessary for us to procure large amounts of products and services. A spend-based analysis of our 2019 baseline already showed that the production and execution of these products and services along our upstream value chain contributes a significant part to our overall emissions. Based on this 2019 baseline, TenneT has set the target to reduce its absolute scope 3 emissions by 30% by 2030 in the categories of purchased goods and services and capital goods. This target is in line with the Paris Agreement's 'well below 2°C scenario'. Our scope 3 target is aligned with a 'well below 2 degree' scenario and is ambitious, because our project portfolio and the required investments in the coming decade are growing, which will require procuring more of our purchased goods and services, leading to an exponential increase in emissions in the short-term.

Our scope 3 emissions are spread across our procurement categories. The majority of these emissions, however, lie in a limited number of categories. Based on our latest analysis we estimate that more than 80% of our total scope 3 emissions are caused by the production, transport and installation of our biggest assets, such as cables, overhead lines, steel towers, offshore platforms, transformers and stations.

In the production of our assets, the biggest contribution to our scope 3 emissions lies in the upstream production of materials, in line with our baseline calculations during the SBTi target setting phase. The majority of emissions caused by material production stem from a small number of materials, primarily steel, aluminium, copper, plastics and concrete.

In order to achieve our target of reducing our scope 3 emissions by 30% by 2030, a committed but also targeted and structured approach is necessary. TenneT has established an internal programme called 'Decarbonising Supply Chain' to develop and implement this approach.

The 'Decarbonising Supply Chain' programme aims at developing and implementing sustainable sourcing strategies. These strategies seek to promote committed action for reducing emissions along our supply chains while ensuring to avoid major impacts on the availability, affordability and quality of our procured products and services. In order to take into account the specificity of our different products and services and the different supplier markets in our procurement categories, we develop and implement a separate sustainable sourcing strategy for each of our procurement categories.

To address our reduction of scope 3 emissions in our indirect value chain upstream through purchased goods, we have allocated 0.2% of our CapEx in our offshore 2GW Program projects for sustainability measures (which also include climate mitigation, among others). These are aligned with the climate change mitigation actions aimed at reducing our indirect emissions.

To be able to achieve our highly ambitious target, we rely on our suppliers and contractors and the innovations they can offer to the goods we procure from them.

To make further progress on our target of reducing scope 3 emissions by 30% by 2030, in 2024 we entered a new phase of our implementing pilot initiatives in the main procurement categories. Given the sheer number of suppliers, the next five years will be focused on moving from these pilot decarbonisation actions to standardising them and further engaging with our suppliers to maximise our joint efforts to decarbonise. We signed a memorandum of understanding with one of our key suppliers, Siemens Energy to enter into a strategic partnership on decarbonising the grid supply chain and for the upcoming years will continue to work on identifying opportunities to reduce emissions in our assets.

Another action we have undertaken is to incentivise suppliers for their measures to reduce emissions. This is implemented in our tender procedures with the help of the environmental cost indicator tool (ECI). The added benefit of this also being the use of a life cycle analysis approach to gain better insights in the lifecycle of our assets. These collective actions are categorised under our lever of supply chain incentivisation and engagement. With each of the measures identified either through engagement, pilots or the ECI, we measure the possibility of reduction and add it to our estimated projected absolute reduction goals.

(Decarbonisation) Lever	What is the action? (taken in the reporting year or planned for the future)?	What are the expected outcomes [of the action] and, where relevant, how [does] their implementation contribute […] to the achievement of policy objectives and targets?	What is the scope of the actions (activities, upstream and/or downstream value chain, geographies and, where applicable, affected stakeholder groups)?	What is the time horizon under which we intend to complete the action?
Scope 1 – Use of alternative insulation gases	Switch to SF_6 alternatives Innovative partnerships with suppliers Preventive maintenance of ageing assets	By having alternative gases in our asset base, we aim to reduce the amount of banked SF_6 in our assets over a period of time, thereby tackling the fundamental issue of having banked volumes of a GHG gas that is susceptible to leakage during the lifetime of an asset.	Own operations & upstream value chain, categories of assets include instrument transformers, circuit breakers and gas insulated metal enclosed switchgear (GIS) which make up the majority of our SF_6 -banked assets	TenneT is committed to having at least two-thirds of our newly installed assets to be SF_6 -free by 2030. These categories of assets include instrument transformers, circuit breakers and gas insulated metal enclosed switchgear (GIS) which make up the majority of our SF_6 -banked assets. Moreover, we have committed to keep our leakages below 0.28% per year until 2030. The action on procuring SF_6 free alternatives is based on the near term subject to market availability. The preventive maintenance and innovative partnerships are actions that we envision both on a near term and long-term horizon.
Scope 1 – Electrification	NL: Transitioning to a diesel-free fleet Installation of charging infrastructure DE: Not determined	NL: reduce emissions while ensuring security of supply DE: due to longer travel distances, by now no concrete action was defined	Own operations, our leased vehicle fleet	NL: fully electric fleet from 2025, with an exception to our on-call crisis fleet. DE: Not determined
Scope 1 – Energy efficiency	For new (sub-)stations, build in accordance with the latest technical standards and standardising the design for energy efficiency For existing stations, estimate where most energy-intensive areas are and use measures to improve efficiency Procure market-based green gas contracts for all our operations, where possible.	Reduce emissions from gas usage as much as possible	Own operations, our offices and stations	Not determined
Scope 2 – Use of market-based instruments for renewable energy	Incentivising suppliers to reduce grid losses through design	Integrating the use phase of assets in our scope for sustainability criteria in tenders, which leads to optimisation of design and a potential reduction of grid losses.	Own operations	Continuous action, based on specific tender for relevant procurement category and demand forecasts
	Purchase Guarantees of Origin (GoOs) in the Netherlands and Germany	Reduction of the impact of grid losses while stimulating the renewable electricity market	Own operations	Every year

(Decarbonisation) Lever	What is the action? (taken in the reporting year or planned for the future)?	What are the expected outcomes [of the action] and, where relevant, how [does] their implementation contribute […] to the achievement of policy objectives and targets?	What is the scope of the actions (activities, upstream and/or downstream value chain, geographies and, where applicable, affected stakeholder groups)?	What is the time horizon under which we intend to complete the action?
Scope 2 – Renewable energy deployment	Installation of solar panels on our substations Procure renewable energy for our offices and substations	Use self-generated renewable energy for our own consumption at substations restricted to the conditions of the EU Unbundling act We procure 100% renewable energy contracts for the electricity used in our offices and substations, where possible	Own operations, our offices and stations	Near-term, but case-case action due to regulatory restrictions Every year based on tender procurements and electricity market purchases
Scope 3 – Incentivisation and supply chain engagement	Decarbonising the Supply Chain programme - For achieving our scope 3 upstream CO_2eq reduction goals, we are committed to a number of different actions. The following actions have been identified in several procurement categories: 1. Use the environmental cost indicator in our framework tenders that considers alternatives which lead to lower emissions considering the whole lifecycle of the asset from cradle to grave; 2. Set up partnership agreements with our prequalified suppliers on using recycled materials, which lead to a lower carbon footprint when compared to virgin materials; 3. Engage suppliers to understand innovations and measures required to facilitate less carbon-intensive options.	Reducing emissions in different categories of scope 3 emissions in different waves, prioritising the procurement categories regarding their potential to reduce scope 3 emissions. In order to work towards our ambitious scope 3 CO_2eq reduction goal, new and joint approaches with the key players in our supply chain will be required. Depending on the supply market situation, this can vary from collaboration with suppliers along the supply chain to coopetition with competitors to reshape the supply chain. For this purpose, we are investigating two potential approaches to reduce CO_2eq in our supply chain: • Reduction of raw/virgin materials within the current supply chain, e.g. the reduction of the demand, replacing products with green products or the use of raw materials with a lower CO_2eq footprint, such as recycled raw materials. • Shaping the value chain jointly with suppliers, e.g. the redesign of the supply chain, such as onshoring suppliers and raw materials through supplier partnerships.	Upstream and downstream value chain	The scope 3 actions are planned in phases or 'waves', with annual reduction goals per category, leading to the end-goal of achieving the 30% reduction by the end of 2030.

Delivering the energy transition

For the execution of delivering the energy transition, aggregated key actions derived from the NEP/IP are grid expansions & reinforcements onshore, ensuring onshore HVDC, and also DC offshore grid connections. The Strategic Asset Management Plan sets the framework and priorities for the portfolio, focusing on reducing asset risks and balancing grid expansion with existing grid maintenance, ensuring that projects are aligned with the company's strategic goals and that resources are allocated effectively. The Asset Investment Plan optimises the portfolio for maximum value, thus determining which projects to undertake and when. The Strategic Asset Management Plan is applicable to both the Netherlands, Germany and Offshore (North sea). The Asset Investment Plans (AIP) are applicable on a national level, i.e. there are two AIPs, one for the Netherlands and one for Germany. After approval by the Asset Committee, the AIP is handed over to the executing units, who create a detailed planning based on the given targets, ensuring that projects are executed according to the approved timelines and that progress is tracked effectively. The execution of projects through these plans contributes towards the switch to a climate-neutral society by 2050 in line with our Target Grid, in line with the target dates per project. The plans include the projects to execute, including the current CapEx investment in Euros to be spend, as well as expected projects including estimated future financial resources allocated to these projects.

Refer to the NEP and IP documents online, which outline information on their expected outcomes in terms of CapEx investments and total build output, the location of the project and the expected completion date per project (not available for every project). Note that all projects relate to our upstream and own operations.

Resource use and circularity

As a result of the implementation of the Circular Economy Strategy, several actions were initiated which all aim to make our material inflow more circular and reduce scope 3 CO_2eq emissions. An agreement with Siemens Energy was formalised in 2024 to use 100% recycled copper in all German power transformers and shunt reactor units. This action facilitates the highest-possible value retention of copper scrap and represents a large improvement in rates of use of secondary raw materials.

Furthermore, a pilot for green steel in latticed steel towers was initiated in Q4 of 2024 in the upstream value chain for one project in northern Germany, and a pilot for green steel in steel construction stations will begin in 2025. Both pilots facilitate the highest-possible value retention of steel scrap, whereas in conventional situations mostly primary steel is used with low shares of recycled content.

In order to support the shift towards the circular economy in plastics production, a pilot for renewable granules for HDPE in production of cable protection pipes is planned for 2025. This action relates to our upstream value chain and the procurement of cable protection pipes in the SuedOstLink project.

For all these actions, we were able to use the same type of financing as we do for our general procurement. These actions lead to a higher CapEx cost but are deemed appropriate for the environmental benefits they bring.

Topic	What is the action? (taken in the reporting year or planned for the future)?	What are the expected outcomes [of the action] and, where relevant, how [does] their implementation contribute[…] to the achievement of policy objectives and targets?	What is the scope of the actions (activities, upstream and/or downstream value chain, geographies and, where applicable, affected stakeholder groups)?	What is the time horizon under which we intend to complete the action?
Delivering the energy transition – realising our Target Grid	Delivering grid capacity and ensuring that our projects are inline to realise our Target grid goals 2045.	Enable the switch to a climate-neutral society by 2050 in line with our Target Grid	Upstream and downstream value chain	Time horizon is determined per action
Resource use and circularity	Agreed with Siemens Energy to use 100% recycled copper in all German power transformer and shunt reactor units	Reduction of impact on virgin copper and reduction of CO_2 emissions; contributes to targets of 40% circular copper inflow and scope 3 emission target	Upstream; Procurement of power transformers and shunt reactors of one supplier (Siemens Energy); Only German units;	Agreement formalised in 2024; execution over course of framework agreement (2024-2026)
	Pilot for green steel in latticed steel towers	Reduction of impact on virgin materials and reduction of CO_2eq emissions	Upstream; Procurement of 4 latticed steel towers for one project in northern Germany.	Q4 2024
	Pilot for green steel in steel construction stations	Reduction of impact on virgin materials and reduction of CO_2eq emissions	Upstream; Procurement of steel construction stations in one specific pilot project	Q1 2025
	Pilot for renewable granules for HDPE in production of cable protection pipes	Reduction of impact on virgin materials and reduction of CO_2eq emissions	Upstream; Procurement of cable protection pipes in SuedOstLink project	Q2 2025

Targets

During our target-setting process, we identified actions to reduce emissions from significant emission categories (refer to full overview of (decarbonisation) levers and key actions in previous chapter). Given that a large share of our emissions stemmed from grid losses, we took into account our role in aiding the energy transition, thereby facilitating the integration of renewable energy in our grid and decarbonising the energy mix to a large extent. Building a robust grid with sufficient infrastructure to support decarbonisation is crucial for eventually achieving a green grid mix with minimal emissions.

The Corporate Investment Manual and Strategic Asset Management Plan provide guidelines for prioritising projects and setting targets. The executing units report on their progress quarterly, and the Asset Committee oversees the overall progress and dependencies. Overall progress on performance of the projects and investments in line with the NEP/IP is monitored and reported through quarterly performance reports. We set yearly targets in the annual planning process and monitor progress in the quarterly performance dialogues, which consists of the Executive Board and senior leaders. TenneT's approach aims to have the right projects prioritised and executed efficiently, balancing the need for grid expansion with the maintenance of the existing grid. This structured process, guided by the corporate investment manual and strategic asset management plan, helps TenneT manage the material opportunity of building more grid while maintaining it smartly. Progress is tracked through the total build output, connections realised and CapEx investment spend. The target for each metric is defined based on backcasting from the Target Grid. For performance against quantitative targets, refer to metrics section hereafter.

We have assessed our global greenhouse gas (GHG) footprint, including scope 1, 2, and 3 emissions, and have developed a plan to reduce our GHG emissions based on these. TenneT previously communicated a carbon neutrality target for 2025, including our scope 1 and 2 emissions, as well as scope 3 emissions from employee commuting and business travel. As part of the target-setting journey, we chose to transition to a near-term SBTi target, and therefore moving to a robust target-setting reflecting climate science. We set a baseline year and analysed in detail the impact of the different emission categories in the respective scopes, including an emissions forecast for each year up until the target year. The significant emission categories were then deemed material and analysed. The SBTi validated our GHG emissions reduction targets in 2021. This validation by SBTi ensures the targets are in line with the Paris Agreement. Our direct (Scope 1) and indirect (Scope 2) emission targets are validated as compatible to the 1.5°C scenario. The absolute reduction target for our value chain (Scope 3) emissions is validated as compatible to the well below 2.0°C scenario.

Our ambition is to reduce our absolute emissions in scope 1 & 2 by 95% in 2030 when compared to a 2019 baseline and reduce our absolute emissions in scope 3 in the category of purchased goods and services & capital goods by 30% in 2030 with the same baseline (the target addresses 76.7% of total 2019 baseline scope 3 GHG emissions). For our baseline year of 2019, scope 1 and 2 represents 54.4% (where scope 1 is 0.5% and scope 2 is 53.9%) of total emissions and scope 3 represents 45.6%. The target was set using gross market-based scope 2 GHG emissions.

Related to scope 3, our baseline inventory for 2019 was done with a spend-based approach. The need to move to a more robust understanding of our supply chain emissions in order to progress towards realising our scope 3 targets led us to move to a hybrid method, combining the spend-based approach with an activity-based analysis. This activity based analysis was executed for our procurement portfolio of over 35 categories of assets both in the Netherlands and Germany and also accounted for the forecasted increase in demand until 2030. We intend to evaluate the impact this methodology change has on our scope 3 target in 2025. The journey of moving from abstract high-level spend based volume to an activity based emission have made it possible for us to realistically define specific measures and actions targeted at specific categories to drive down emissions.

The boundary coverage for our scope 3 target is 76.7% of our total scope 3 emissions, taking into account the categories of purchased goods and services and capital goods. Based on our latest analysis we estimate that more than 80% of our total scope 3 emissions are caused by the production, transport and installation of our biggest assets, such as cables, overhead lines, steel towers, offshore platforms, transformers and stations. In the production of our assets, we estimate that the biggest contribution to our scope 3 emissions lies in the upstream production of materials which these assets are made off. The majority of emissions caused by material production stem from a small number of materials, primarily steel, aluminium, copper, plastics and concrete.

TenneT has documented the significant assumptions on which the target is based. As part of the critical assumptions for setting GHG emission reduction targets, we have considered future developments and how these will potentially impact both our GHG emissions and emissions reductions. Hereafter is an overview of the significant assumptions for scope 1, 2 and 3 which were used for the calculation of the target and TenneT's carbon footprint.

The targets align with our GHG inventory boundaries applied to our GHG emissions performance reporting, as the baseline setting and the carbon footprint are calculated and reported in CO_2 equivalents. Refer to General section of the Sustainability statements: Consolidation for the inventory boundary. Our GHG emission reduction targets are absolute emission reduction targets and we do not include GHG removals, carbon credits or avoided emissions as a means of achieving the GHG emission reduction targets.

The baseline year assessment covered the entire activities of TenneT, which included both upstream and downstream activities for scope 3. Our activities as a grid operator include transmitting electricity, and all activities which are either core to this purpose or support in this process have been covered. In addition, the GHG protocol was used extensively to identify every emission possibility though insignificant and minute (such as refrigerants) to enable a full scope coverage of activities. However, influence of external factors, such as temperature anomalies, were not considered in this scoping. The baseline value and base year has not undergone any significant changes as mentioned. The decarbonisation levers for scope 1 and 2 are determined with the 1.5°C target scenario, and all decarbonisation levers involve technological, market and policy- related developments.

For TenneT, 2019 has been a representative reference value in capturing the emissions. Due to the effects of the pandemic in 2020, the carbon emissions in certain scopes were not an accurate representation. Also, there were not enough ambitious actions taken before 2019 that could attest to our progress towards 2030 targets. If there is a need to reassess our targets in line with SBTi latest climate scenarios in the future, we will consider the year which can be most representative of our activities. There have not been any changes in the target in the past year. Refer to General section of the Sustainability statements: Consolidation for the inventory boundary.

Scope category		Assumptions
Scope 1	1. Stationary combustion	• Emission factors adjusted from $kgCO_2e/m^3$ to $kgCO_2e/GWh$ using BEIS fuel properties • An extrapolation was made for heating oil consumption in NL for emergency power stations based on the consumption in GE and the number of stations in each location
	2. Mobile combustion	• Passenger vehicle emission factor adjusted to only include combustion (Tank To Wheel) emissions accounted for in scope 3)
	3. Refrigerants	• Emission factor sourced from BEIS instead of GHG Protocol GWPs
Scope 2	1. Electricity	• No change in emission factors
Scope 3	1. Purchased goods & services	• Economic emission factors were assigned to each spend category. • Emission factors were adjusted with inflation.
	2. Capital Goods	
	3. Fuel and Energy related activities	• Emission factors Well-to-Tank (WTT) applied
	4. Business Travel	• Rail and air travel emission factors adjusted to include Well-to-Tank (WTT)
	5. Employee commuting	• Passenger vehicle emission factor adjusted to include Well-to-Tank (WTT)

Due to the relative novelty of the topic of resource use and circularity for TenneT, the overarching targets are future-based and relate to Circular Design, Circular Inflow and Circular Outflow. All targets were developed with internal stakeholders from different units and are voluntary, as we are not subject to specific mandatory targets by laws or regulations.

Regarding Circular Design, we strive to improve the potential recovery of our assets until 2030 and will therefore define six focus categories for 2025 onwards. Improving the potential recovery of our assets is directly connected to (and achieved by) a more circular product design (e.g., by better dismantling, reusability, recyclability) and relates to Reuse, Recycling and Recovery (waste hierarchy). Improving the potential recovery of our assets is considered a fundamental long-term lever to ultimately making our material inflows and outflows more circular and therefore to optimising our use of materials and reducing our dependency on virgin materials. Only if our assets are designed in a circular way can we close and shrink their material loops at the end of their lives. Currently, in this area there is no defined target level to be achieved, nor is there a baseline value to measure progress against. Today we have too few insights on the potential recovery of our assets and their respective materials. In order to be able to improve the potential recovery of our assets, it is vital we improve these insights. A deep understanding of the potential recovery of our assets is the only way we can set actionable targets and identify areas for improvement and concrete measures.

Another target, which refers to all layers of the waste hierarchy, is to review the first six focus categories for circular design principles in 2025. The aim of reviewing for circular design principles is to identify improvement potentials in designing our assets in a more circular way, to ultimately reduce barriers for circular inflow and circular outflow. Consequently, we can identify ways to make our assets more circular. Our circular design principles include 'design for reduction, circular material use and prevention', which means designing assets in a way that minimises material demand and removes barriers for the use of circular materials. The focus categories and materials of our Circular Economy Strategy for TenneT Netherlands and Germany are in scope for these overarching targets.

Regarding Circular Inflow, our overarching target is to make our material inflow more circular until 2030 and consequently minimise our impact on primary raw materials (alongside minimising the demand for materials in general). It relates to the Reuse, Recycling and Recovery of our focus categories and materials for TenneT Netherlands and Germany. Making our material inflow more circular can reduce the environmental and societal impact of material use as well as risks concerning supply chain disruptions, such as an increase in costs or a decrease in resource availability. Currently, in this area there is no defined target level to be achieved, nor is there a baseline value to measure progress against. In 2024, we measured the circularity of our overall inflow for the first time, which is an assumption-based figure.

For the material copper, we were already able to gather more insights and aim to achieve a circular inflow for copper of 40% in 2025 (compared to 36% in 2023 as a baseline). The scope applied for this target is our upstream value chain regarding our focus categories and it relates to the layer of recycling. Through this target we strive to increase the relative share of non-virgin inflow for copper, which consequently minimises our impact on primary copper. The most relevant categories concerning copper inflow are transformers, cables and HVDC stations. Our data sources to define our target were LCA reports and Raw Material Passports. The target directly connects to TenneT's scope 3 emissions target of a 30% reduction by 2030, which is based on SBTi.

In 2025, we will look to further improve our data maturity. We aim to bring four focus materials to the same level as copper in 2025 (measuring their circular inflow based on supplier-specific data and setting quantitative targets), namely steel, aluminium, concrete and plastics. The scope applied for this target is our upstream value chain regarding our focus categories and it relates to the layer of Reuse, Recycling and Recovery. By improving our data maturity and insights into our supply chains for further materials, we lay the foundation for increasing the use rate of circular materials, as well as the minimisation of primary raw materials. Only by gathering information about the sourcing of these materials across our supply chains can we set actionable targets and identify areas to improve and concrete measures.

Metrics

To gain a deeper insight in our inflow and outflow at TenneT, having an appropriate basis is a prerequisite to obtaining the proper insights to steer on. In general, the measurement of these metrics is not validated by an external body other than the assurance provider, unless stated otherwise.

Greenhouse gas emissions - Methodology

TenneT's carbon emissions are reported in accordance with the GHG protocol corporate standard along with scope definitions, boundaries and geographies in which we operate. This is presented in a tabular format with clear indications of using either market-based/location-based or both types of disclosures where applicable and desirable. Refer to General Consolidation section of the Sustainability statements: for the inventory boundary. Throughout the reporting period, no significant changes have occurred within our reporting entity and our upstream and downstream value chain. TenneT reports its carbon footprint in every scope on a country and consolidated level. This disaggregation is due to the nature of our operations. We report uniformly on our scopes in every category of our material emissions, aside from geography, since the nature of our activities remains the same in both countries.

The assumptions we make in disclosing in accordance with the GHG protocol corporate standard are limiting our emissions to our material categories in every scope. Estimations have been used, where measured data was not available (yet), for instance to determine the kilometres travelled by our German colleagues when commuting. The emission factors are sourced from credible online sources such as the emission factors databases IPCC AR6, EcoInvent or CO2emissiefactoren.nl. Refer to Targets section for an overview of the significant assumptions for scope 1, 2 and 3 which were used for the calculation of the target and TenneT's carbon footprint. For market-based reporting, the actual emission factors mentioned in our purchase contracts provided by energy suppliers are used. Each activity is multiplied by the relevant emission factor. An Excel-based calculation is then used for our footprint and is disclosed along with the emission factors in our additional data document in the respective scopes.

For TenneT, the most relevant categories of gases from this list are CO_2 and SF_6 emissions. These are included in our carbon footprint as respective emissions under every scope. All the required emissions are accounted for, as the remainder of the gases, such as CH_4, N_2O, HFCs, PFCs and NF_3 are accounted for by reporting in CO_2 equivalents. All the required emissions are accounted for. TenneT does not have emissions related to biomass.

Scope 1

Our standard reporting structure uses the specified categories. For process emissions, we have identified SF_6 - related leakages. For mobile combustion and stationary combustions, we have identified our gas use and lease vehicles. Fugitive emissions result from our use of refrigerants. Each of these emission categories measures activity data for reach of the greenhouse gases and multiplies it with the relevant emission factor obtained from verified sources such as IPCC AR6 and CO2emissiefactoren.nl and disclosed in our footprint.

Scope 2

TenneT follows all the methodologies applicable to contractual instruments, and we also report both location- and market-based emissions (considered under contractual instruments). This also includes the purchasing of renewable energy for energy consumption. Due to different material categories relating to different emissions, we avoid double counting. Regarding the share and types of contractual instruments used for the sale and purchase of energy bundled with attributes about the energy generation or for unbundled energy attribute claims, in the Netherlands grid losses, offices and (sub) stations are bundled, cable losses are unbundled; in Germany all are unbundled. TenneT will continue to report on gross emissions and net emissions, as in our gross calculations, removals and offsets are not included.

Scope 3

TenneT follows the GHG protocol corporate standard and follows all the methodologies applicable to scope 3 reporting. We report only on our significant scope 3 categories that either represent more than 5% of our scope 3 emissions baseline (categories purchased goods and services, capital goods and fuel and energy related activities) or are considered significant due to our commitments as our carbon neutrality target for 2025 and to initiatives such as 'Anders Reizen' (categories business travel and employee commuting). Our downstream emissions are not accounted for since we are not a product-based organisation and therefore do no sell (completed) products to customers. Our upstream categories in scope 3 are material to us and in line with our targets, we report on the aforementioned categories. TenneT does not use GHG removals or credits to compensate our scope 3 GHG emissions.

The reporting boundaries of our scope 3 GHG emissions depend on the scope 3 category. The emissions from purchased goods and services and capital goods contain the upstream emissions of the products procured. The spend-based emission factors used in our calculations are sourced from Exiobase and include full cradle to gate emissions. For specific materials we calculated emissions using factors from standard LCA databases or supplier-specific emission factors. Emissions from fuel and energy related activities also include all upstream emissions and are calculated using the TTW emission factors of the fuels and electricity we consume. The reporting boundary of the categories business travel and employee commuting covers at least the scope 1 and 2 GHG emissions from the modes of transport used and includes the scope 3 emissions where available.

We hope to increase the granularity of our scope 3 reporting gradually over the years. There has not been a significant change in TenneT's activities, but this will be considered for the future where and if applicable. The percentage of emissions from primary data is 84% and secondary data is 16%, where we consider activity data obtained from our suppliers to be primary data and scope 3 emissions calculated through a spend-based method to be based on secondary data.

	Retrospective data										Milestones and targets		
	Base year (2019)			2024			2023			%			Annual % target/base year
	DE	NL	**Total**	DE	NL	**Total**	DE	NL	**Total**	2024/2023	2025	2030	
Scope 1 GHG emissions													
Emergency power unit	67	328	395	244	2,226	2,470	240		240	1029%			
Sulphur hexafluoride (SF_6) leakages	2,750	20,257	23,007	2,565	17,843	20,408	1,957	12,738	14,695	139%			
Lease vehicles	75	2,268	2,343	2,675	2,397	5,072	3,063	2,784	5,847	87%			
Gas consumption	601	240	841	-	562	562	-	583	583	96%			
Refrigerants	37	94	131	38	99	137	38	99	137	100%			
Total gross scope 1 GHG emissions (tCO_2eq)	**3,530**	**23,187**	**26,717**	**5,522**	**23,127**	**28,649**	**5,298**	**16,204**	**21,502**	**133%**			
Scope 2 GHG emissions												145,787	-95%
Scope 2 GHG emissions (tCO_2eq) market based													
Grid losses	2,759,265	-	2,759,265	179,827	-	179,827	2,307,310	-	2,307,310	96%			
Lease vehicles	-	-	-	594	304	898	680	368	1,048	86%			
Electricity use technical locations	129,762	-	129,762	-	-	-	-	-	-	-			
Electricity use non-technical locations	-	-	-	-	-	-	-	-	-	-			
Total gross market-based Scope 2 GHG emissions (tCO_2eq)	**2,889,027**	**-**	**2,889,027**	**180,421**	**304**	**180,725**	**2,307,990**	**368**	**2,308,358**	**8%**			
Scope 2 GHG emissions (tCO_2eq) location based													
Grid losses	-	-	-	1,427,665	672,488	2,100,153	1,749,522	719,030	2,468,552	85%			
Lease vehicles	-	-		594	304	898	680	368	1,048	86%			
Electricity use technical locations	-	-	-	84,830	23,379	108,209	86,874	9,101	95,975	113%			
Electricity use non-technical locations	-	-	-	455	3,674	4,129	1,518	3,433	4,951	83%			
Total gross location-based Scope 2 GHG emissions (tCO_2eq)[1]	**-**	**-**	**-**	**1,513,544**	**699,845**	**2,213,389**	**1,838,594**	**731,932**	**2,570,526**	**86%**			

	Base year (2019)			Retrospective data 2024			Retrospective data 2023			%	Milestones and targets		
	DE	NL	**Total**	DE	NL	**Total**	DE	NL	**Total**	2024/2023	2025	2030	Annual % target/base year
Significant scope 3 GHG emissions													
C1 Purchased goods and services[2]	-	-	333,926	508,000	382,000	890,000	186,300	124,200	310,500	287%		1,311,056	-30%
C2 Capital Goods[2]	-	-	1,539,011	648,000	551,000	1,199,000	227,700	151,800	379,500	316%			
C3 Fuel- and energy-related emissions not included in scope 1 or scope 2[2]	484,096	29,929	514,025	225,414	131,378	356,792	254,341	98,094	352,435	101%			
C6 Business travel	1,291	1,685	2,976	5,155	2,493	7,648	1,293	1,539	2,832	270%			
C7 Employee commuting	2,967	1,685	5,841	5,049	1,653	6,702	1,498	1,111	2,609	257%			
Total significant scope 3 GHG emissions (tCO_2eq)	**488,354**	**33,299**	**2,395,779**	**1,391,618**	**1,068,524**	**2,460,142**	**671,132**	**376,744**	**1,047,876**	**235%**			
Total GHG emissions market based (tCO_2eq)	**3,380,911**	**56,486**	**5,311,523**	**1,577,561**	**1,091,955**	**2,669,516**	**2,984,420**	**393,316**	**3,377,736**	**79%**			
Total GHG emissions location based (tCO_2eq)[3]	**-**	**-**	**-**	**2,910,684**	**1,791,496**	**4,702,180**	**2,515,024**	**1,124,880**	**3,639,904**	**129%**			
Net revenue in EUR million (note 2)						8,430			9,222	91%			
Total GHG emissions (market-based) per net revenue (tCO_2eq/EUR million)						317			366	86%			
Total GHG emissions (location-based) per net revenue (tCO_2eq/EUR million)						558			395	141%			

1 Location-based data not available for base year
2 Data was not available in 2019
3 Location-based data limited available for base year

Refer to the table above for the full overview of scope 1, scope 2 and scope 3 GHG emissions for TenneT (consolidated, and separate for the Netherlands and Germany). We reduced our total scope 1 and scope 2 market-based GHG emissions significantly in 2024 compared to prior year and our emissions are approaching our scope 1 and 2 SBTi target. The reduction is mainly due to the volatility of prices of guarantees of origin that in 2024 were not as drastic as in 2024, allowing us to opt for more of these market-based instruments to reduce the emissions of the electricity consumption from German grid losses. Our scope 3 GHG emissions increased compared to prior year, mainly driven by an increase in the largest categories purchased goods and services and capital goods. The increase is primarily attributable to an expansion in the scope of expenses and investments, coupled with an enhancement in data quality, although a portion of the growth can also be attributed to rising expenses and investments. The progress made in 2023 and 2024, compared to the 2019 baseline, for the categories of purchased goods and services and capital goods should be interpreted with consideration that these figures were calculated using a hybrid method. In contrast, both the 2019 baseline and the 2030 target were derived using a spend-based method.

The table above excludes the GHG emissions of our non-regulated entities NOVEC and Relined. Their total scope 1, 2 and 3 GHG emissions total to 10,316 tCO_2eq (Scope 1: 23 tCO_2eq, Scope 2: 453 tCO_2eq, Scope 3: 9,841 tCO_2eq).

The table shows TenneT's GHG emissions intensity (total GHG emissions per net revenue):

GHG intensity per net revenue	**2024**	2023	% 2024/2023
Total GHG emissions (location based) per net revenue (tCO_2eq/EUR million)	558	395	141%
Total GHG emissions (market based) per net revenue (tCO_2eq/EUR million)	317	366	86%

The table shows the reconciliation of the net revenue used to calculate GHG intensity to the relevant line item or notes in the financial statements:

GHG intensity per net revenue	**2024**	2023
Net revenue used to calculate GHG intensity	8,430	9,222
Net other revenue (other)	-	-
Total net revenue (note 2)	**8,430**	**9,222**

No 1893/2006 of the European Parliament - transmission of electricity (D35.1.2) and distribution of electricity (D35.1.3). The table hereafter excludes the consumption of our non-regulated entities NOVEC and Relined. Their total estimated consumption MWh from fossil fuel are 2,348 and 21,998 from renewable energy.

Energy consumption and mix

TenneT's operations fall under the following high-climate impact sectors of Annex I section C to Regulation (EC)

Energy consumption and mix in megawatt hours (MWh)	2024 DE	2024 NL	**Total**
Fuel consumption from coal and coal products	-	-	**-**
Fuel consumption from crude oil and petroleum products	12,986	17,872	**30,858**
Fuel consumption from natural gas	1,760	3,090	**4,850**
Fuel consumption from other fossil sources	-	-	**-**
Consumption of purchased or acquired electricity, heat, steam, and cooling from fossil sources	549,784	1,568	**551,352**
Total fossil energy consumption	**564,530**	**22,530**	**587,060**
Consumption from nuclear sources	**-**	**-**	**-**
Fuel consumption for renewable sources, including biomass (also comprising industrial and municipal waste of biologic origin, biogas, renewable hydrogen, etc.)	-	-	**-**
Consumption of purchased or acquired electricity, heat, steam, and cooling from renewable sources	3,351,172	1,561,388	**4,912,560**
Total consumption of self-generated non-fuel renewable energy	-	-	**-**
Total renewable energy consumption	**3,351,172**	**1,561,388**	**4,912,560**
Total energy consumption	**3,915,702**	**1,583,918**	**5,499,620**
Net revenue in EUR million (note 2)			**8,430**
Operational energy efficiency in MWh/EUR million revenue			**652**
Share of fossil sources in total energy consumption	14%	1%	**11%**
Share of renewable sources in total energy consumption	86%	99%	**89%**
Share of nuclear sources in total energy consumption	0%	0%	**0%**

GHG removals and GHG mitigation projects financed through carbon credits

TenneT has an absolute emission reduction target and does not have a net-zero, long-term target yet. We therefore do not currently consider GHG removals as part of our climate mitigation strategy to reach our targets in our own operations, nor in our upstream and downstream value chain, and we are not investigating technical carbon removal solutions.

We resort to buying Gold Standard and VCS carbon credits from the voluntary carbon markets for meeting our rotating credit facilities performance targets and our 2025 climate-neutrality goals. How many credits we purchase is dictated by our rotating credit facility performance targets and our actual performance with respect to SF_6 leakages and mobility. Refer to the paragraph "TenneT's sustainable Revolving Credit Facility: linking climate performance to finance" in section Transition to a brighter energy future within social and planetary boundaries. We also purchase Gold Standard carbon credits to offset part of the emissions from the consumption of natural gas of our non-technical locations, relating to the natural gas consumption in our offices.

TenneT follows a three-step approach for both our 2025 climate-neutrality and 2030 targets. We aim to reduce our direct and indirect emissions, and where this is not possible, to green our emissions by using market-based instruments. Where our efforts in reducing and greening do not succeed due to the nature of our operations, we purchase carbon credits to fulfil our term facility-linked performance metrics and our 2025 climate-neutrality target. For our 2030 SBTi targets, offsetting using carbon credits is not a consideration since our targets relate to absolute emission reductions. Like any neutrality claim, we direct our focus to reducing our emissions in line with our absolute emission reduction targets and for the parts which we absolutely cannot avoid given our role as a critical infrastructure operator, we resort to buying carbon offsets only to meet our 2025 climate-neutrality goals. The challenge therefore remains to reduce grid losses sufficiently and therefore achieving our climate-neutrality 2025 goal. This does not interfere with our 2030 SBTi targets, since these are an absolute reduction target with reference to a 2019 baseline.

Our Gold Standard and VCS carbon credits are purchased through the voluntary carbon market. Certification of the credits are a minimum requirement and are subjected to availability in the voluntary carbon market. We opt for renewable energy projects in developing countries. All Gold Standard and VCS-certified activities follow a Gs4GG certification process. Activities must deliver impact on a minimum of three UN Sustainable Development Goals (SDGs) and ensure that climate initiatives also work for climate justice, by delivering benefits to SDGs such as no poverty, good health and wellbeing, gender equality, water and sanitation, affordable clean energy, ecosystem and biodiversity conservation, and of course climate action. In line with the gender-sensitive design principles, all Gold Standard and VCS-certified activities must take into account the overall societal context from a gender perspective and comply with gender equality and women's empowerments requirements. Given the developments within the voluntary carbon markets, we choose our credits carefully but are limited to the market options available. We also consider our societal role and keep affordability as a key element when purchasing credits. Our Gold Standard credits to compensate for our natural gas emissions are obtained through our supplier of natural gas.

TenneT has a climate-neutrality 2025 target which covers our material emissions for scope 1, 2 and the mobility part of our scope 3 emissions which was approved in 2018. In 2019, we embarked on a more robust climate target setting accredited to a recognised science-based framework. Since our short-term target for 2025 is still a part of our approved strategy and we transition from that towards our absolute reduction 2030 target, we treat the climate-neutrality target as an intermediate step.

The quantity of total carbon credits cancelled in 2024 were 31,122 tonnes of CO_2eq. Refer to the table hereafter for detailed information. The share of carbon credits that qualifies as a corresponding adjustment under Article 6 of the Paris Agreement is not relevant for TenneT, since we do not participate in voluntary carbon market projects as a collaborative partnership for national goals. TenneT does not purchase carbon credits in advance to enable future cancellation. Refer to the targets methodology for the significant assumptions taken into account.

Carbon credits cancelled in the reporting year	2024	2023
Total (tCO_2eq)	31,122	7,461
Share from removal projects (%)	0%	0%
Share from reduction projects (%)	0%	0%
Gold Standard and VCS certificates (%)	100%	100%
Share from projects within the EU (%)	0%	100%
Share of carbon credits that qualifies as a corresponding adjustments (%)	0%	0%

Internal carbon pricing

TenneT applies an internal carbon pricing scheme in accordance with the sector agreement among the TSOs and DSOs in the Netherlands. Annually, the Net Beheer Nederland Domeinraad decides the pricing scheme, in alignment with the regulator ACM. For 2024, the current price is 150 euros/ton and an analysis is being executed along with other grid operators in the Netherlands to analyse the impact of different use cases for carbon pricing.

We use the Incentive Compensation Plan scheme to incentivise the use of SF_6 alternatives. We use it to calculate fictive penalties in our tender processes. The penalties are in line with public procurement regulations and add a

certain weighing factor to gases which have a greater GWP than 1. When tenders are running and offers from multiple manufacturers have been received, the ones with the lowest GWP have a better chance of winning the tender (among other criteria such as safety and quality). Through this pricing mechanism we penalise the CO_2eq of the gas.

Our internal carbon pricing system is applicable for both the Netherlands and Germany. It covers the activities of procurement decisions if there are tenders involving SF_6 GIS, asset designs for cables where cable losses are calculated using operational costs, and in business cases for solar panels where internal carbon pricing is used to calculate the return of investment when considering installation of the solar panels within the limited scope of applicability, in accordance with the EU Unbundling Law for renewable energy deployment.

To decide the carbon price, the societal costs such a pricing instrument would bring are the main critical assumption, given that it was adopted in a sector-wide pricing agreement of national and regional grid operators. It started at a price of 50 euros per ton in 2020, in line with the then EU ETS price, to analyse the impact such a pricing instrument could have and increased slowly to the current 150 euros per ton, again to represent the EU ETS pricing schemes and the PBL recommendations in the Netherlands. The prices may not necessarily be relevant for every application, but in TenneT's case, we did see an impact with incentivising SF_6 alternatives with 150 euros per ton. The calculation methodologies cannot be disclosed since these are protected through our procurement procedures and confidentialities, which govern public procurement.

TenneT uses the pricing scheme only for fictive penalties during the procurement of SF_6 assets. This cannot be reflected in financial statements because we do not use the internal carbon pricing scheme to identify low carbon investments. Since it only applies a penalty, the internal carbon price rather acts as an instrument to incentivise alternatives for SF_6. As this scheme applies only to the SF_6-related scope 1 emissions, the approximate gross emissions it relates to are less then 1%. The methodology and significant assumptions behind the metric, including limitations, is not currently documented.

Delivering the energy transition

We track progress of several KPIs.

Metric	2024 actuals			2023 actuals			Target 2024		
	NL	DE	Total	NL	DE	Total	NL	DE	Total
New KM line & cables	59 km	186 km	245 km	44 km	151 km	195 km	66 km	195 km	261 km
Newly installed GW offshore	0.0 GW	0.0 GW	0.0 GW	1.4 GW	0.9 GW	2.3 GW	0.0 GW	0.0 GW	0.0 GW
Connections realised in # bays	40	0	40	Information not available			36	0	36
CapEx investment spend in EUR million	3,783	6,852	10,637 (incl. 2 non regulated)	2,948	4,779	7,730 (incl. 3 non regulated)	N/A	N/A	10,919

We track the total build output in lines or cables in kilometres, and in gigawatts of offshore wind energy capacity. This directly relates to our Target Grid, NEP and IP, as they define the electricity grid supporting a decarbonised energy system, and what projects need to be finalised to fulfil that target as it provides insights on project progress for the year. The total build output is the sum of total amount of new kilometres line and cables, throughout the year for all projects. Although there has been an increase compared to 2023, the set target was not met in 2024.

The in 2024 newly installed offshore capacity was 0.0 GW. The projects where we have invested in are still under construction. The year to date offshore capacity is 12.2 GW.

We also measure through the number of customer connections, counted as bays or equivalent functionality. We monitor newly realised customer connections as an indication of how well TenneT is able to connect the customers to our grid compared to the demand. We have been able to meet our target of 2024.

Next to that, we also keep track of the total amount of CapEx investment in Euros spend (refer to note 2 Segment reporting in financial statements for total CapEx investment in Euros). This is the sum of all capital expenditures invested in the year of target for all projects. In 2024, we invested EUR 10,637 (refer to note 3 Tangible fixed assets and note 5 Intangible assets in the financial statements) to expand our grid capacity, nearly reaching our target level of investments. Refer to the Grid map in the section Building the electricity grid of tomorrow for information in which area the investments have increased the capacity of our grid. Part of the investments is related to utilising the grid, reference is made to the section Utilise the grid to empower society.

For more details regarding the progress that has been realised, reference is made to section Building the electricity grid of tomorrow.

Resource use and circularity

Resource inflows

All inflow metrics reported in the following section refer to the products and materials that have our primary focus, mentioned in the Policies section. As copper has been defined as the pilot material to develop more mature data management, the underlying processes and data sources for copper differ partly from those for the other focus materials. We disclose inflow metrics for all our focus materials for the first time in 2024, whereas the data collection process regarding copper is more mature with regards to available data.

The basis to calculate the respective metrics relates to the product volume and the weight of the respective materials and products.

Volumes of purchased product units are obtained, whereas for copper, the volumes are reported on a more granular level, the product level (e.g. per type of power transformer). For the other materials, volumes are provided on a more aggregated level, the category level (mostly average units), as part of an established demand planning process.

Subsequently, weight to use in the calculation is determined, based on Raw Material Passports or LCA reports, directly provided by our suppliers. If such are not available, the source of information is qualified estimates of internal asset specialists, mostly based on data sheets or project drawings and provided in data collection interviews as part of the DSC portfolio analysis in 2023. For copper, weight information is obtained on a product level, while for other materials the information is obtained on a category level.

To determine the percentage of secondary material for copper, this is also provided on product level and is based on raw material passports or LCA reports, directly provided by our suppliers.

For all other reported materials other than copper, as well as on biological material and recyclable content for all materials (including copper), this is based on informed assumptions. These assumptions were collected on a material level by internal sustainability experts, supported by external expert advice, and are aligned with the business units Supply Chain Management and Asset Management. Depending on the availability and applicability, the assumptions are based on raw material passports and LCA reports from suppliers, sectoral average values (e.g. from databases such as ecoinvent or the Nationale Milieudatabase), and internal and external expert judgement.

As all metrics for the focus materials other than copper are reported for the first time, no comparative figures are shown. The only exemption is copper, where we reported 5,100 tons of copper with a circular inflow of 36% for 2023. The percentage and weight of biological material is not included in the table for 2024, as the percentage for all focus materials is currently 0 as most materials do not contain biological materials, such as metals or minerals. Concrete, plastics and insulating liquids in TenneT assets currently also do not contain biological materials due to technical and market limitations, which we are aiming to resolve in the future.

The fact that many data points are largely based on assumptions, and that these assumptions are largely based on sectoral averages and estimates, leads to comparatively low levels of accuracy and high levels of measurement uncertainty, which is mitigated as much as possible by using the most accurate source of information that is available, and by applying averages and estimates that are representative for our products and supply chains.

In the future, the accuracy of measurement will be improved by applying the same processes that have been established for copper for further focus materials, by increasing the availability of supplier specific data through raw material passports and LCA reports, and by improving insights into our supply chains and asset designs.

Resource outflows

Products and materials

Please note that due to the nature of our business, we do not sell products but provide a utility service. As a result, ESRS E5 requirements 35 and 36 are addressed in a different manner as we focus on the construction of the assets we use to transmit electricity. TenneT does not produce and sell products. TenneT only procures assets to be installed in our grid as well as related products and services for installation, operation, maintenance and end-of-life treatment of these

Material	Overall total weight of products and materials (in t)	DE	NL	NR	% Percentage of secondary reused or recycled components, intermediary products and materials	Weight of secondary reused or recycled components, intermediary products and materials (in t)	DE	NL	NR	% Potential recovery rate
Copper	8,345	7,837	491	17	35%	2,927	2,705	216	6	95%
Steel	210,273	107,238	102,615	420	39%	82,007	41,823	40,020	164	95%
Aluminium	38,131	16,044	22,011	76	0%	-	-	-	-	97%
Concrete	220,873	143,375	77,057	441	2.5%	5,521	3,584	1,926	11	99%
Plastics	41,311	25,659	15,570	82	0%	-	-	-	-	90%
Gravel	821,481	362,626	457,215	1,640	0%	-	-	-	-	99%
Sand	2,543,985	732,612	1,806,294	5,078	0%	-	-	-	-	99%
Porcelain	43	43	-	-	0%	-	-	-	-	100%
Lead	9,982	1,850	8,132	-	54%	5,390	999	4,391	-	95%
Insulating liquids	3,495	2,567	929	-	0%	-	-	-	-	99%
Bentonite	49,827	49,728	-	99	0%	-	-	-	-	100%
Total	**3,947,747**	**1,449,580**	**2,490,314**	**7,853**	**2%**	**95,845**	**49,111**	**46,553**	**181**	**99%**

assets. However, through defining the technical specifications for the procured products, as well as through evaluating different offers also on technical functionalities, TenneT does have a direct influence on the design and thus the durability of these products. For the useful lives of the key products built in TenneT's asset please refer to the key estimates and assumptions of the tangible fixed assets. The specified lifetimes are a hard requirement in TenneT's procurement process, and our suppliers are bound by contract to design and manufacture the products in such a way that the specified lifetimes are met. The lifetimes are specified to the current technically feasible maximum while considering other crucial factors such as risk (esp. reliability of the grid), cost, and performance. During the life cycle of our assets, we take different measures to achieve the specified lifetimes, as long as grid reliability is ensured and it is justified from an economical and performance perspective. Lifetime realisation is achieved e.g. through maintenance frameworks and our so-called Health Index. The Health Index allows us to constantly monitor the health of our assets which ultimately enables predictive maintenance measures to maximise lifetimes.

All our assets are designed to be repaired according to the requirements set in the before mentioned specifications and within the therefore set lifetime. The repairability is also ensured by the respective maintenance frameworks. Our maintenance frameworks prioritise repair of existing assets over replacement and are constantly implemented by our GFO service groups in co-operation with AMT.

Waste

The reporting year 2024 shall serve as a baseline year for cumulative waste data figures, as TenneT started to gain deeper insights into its material outflows and is reporting on waste metrics for the first time in its Integrated Annual Report against a more detailed level of measurement and estimation. The same scope of materials is applied as for inflow metrics with the addition of soil being only an outflow material.

The waste definitions applied are in line with the Waste Framework Directive 2008/98/EC while waste generated by TenneT's own activities or on own premises is included. Given the business of TenneT, this includes three main categories: 1) project execution, 2) high-voltage substations and platforms and 3) offices and warehouses.

A large part of the relevant waste data to report relates to the first category and is being generated outside of TenneT's organisational boundaries, by our contractors that realise the assets they deliver to us. The fact that others generate this waste, doesn't change for us that we should also report on the waste produced in this part of our supply chain. As this needs to be collected outside of our organisation, this is more challenging. In preparation of the first time application of the ESRS standards, much effort was put in collecting this from the many contractors we are working together with. These efforts have resulted in much greater insights into our waste performance, however we were unable to obtain all data. We therefore made use of the best estimations at hand, performed by our HSE advisors to come to more complete data, however we are aware of the inherent risk completeness and accuracy of the data we currently have. Estimations also apply for the treatment of waste, where a conservative approach was applied in using the legal minimum.

	Hazardous waste				Non-hazardous waste				Total waste
In kilograms	DE	NL	NR	**Total**	DE	NL	NR	**Total**	
Diverted from disposal									
Preparation for reuse	0	3,024	12	3,036	0	6,594,893	26,380	6,621,273	6,624,309
Recycling	153,688	830,268	3,936	987,892	305,533,975	275,456,805	2,323,963	583,314,743	584,302,635
Other recovery operations	5,384,417	377,868	23,049	5,785,334	412,741,567	25,849,472	1,754,364	440,345,403	446,130,737
Total diverted from disposal	**5,538,105**	**1,211,160**	**26,997**	**6,776,262**	**718,275,542**	**307,901,170**	**4,104,707**	**1,030,281,419**	**1,037,057,681**
Directed to disposal									
Incineration	79,062	888	320	80,270	248,923	1,013,772	5,051	1,267,746	1,348,016
Landfill	1,761,346	280	7,047	1,768,673	18,474,008	50,000	74,096	18,598,104	20,366,777
Other disposal	0	0	0	0	0	157,240	629	157,869	157,869
Total directed to disposal	**1,840,408**	**1,168**	**7,366**	1,848,942	**18,722,931**	**1,221,012**	**79,776**	**20,023,719**	**21,872,661**
Total	**7,378,513**	**1,212,328**	**34,363**	8,625,204	**736,998,473**	**309,122,182**	**4,184,483**	**1,050,305,138**	**1,058,930,342**
Diverted from disposal	75%	100%		79%	97%	100%		98%	**98%**
Directed to disposal	25%	0%		21%	3%	0%		2%	**2%**

More information and examples on how we manage these impacts are included in the chapters 'Building the electricity grid of tomorrow', 'Utilise the grid to empower society', 'Deliver more grid capacity together for our customers and to serve society' and 'Transition to a brighter energy future within social and planetary boundaries' of the Executive Board Report section of this report.

Taxonomy-aligned KPIs

Introduction

The EU Taxonomy constitutes one of the cornerstones for both the European Green Deal as well as the EU Action Plan on Sustainable Finance. It aims to facilitate the flow of capital towards more sustainable investments in the EU. However, to do so, a clear definition of what constitutes as "sustainable" is needed. And this is what the EU Taxonomy is aimed at – providing clear guidance on when an activity can be deemed sustainable. In 2023, additional guidance has been published with respect to the remaining four environmental goals:

- The sustainable use and protection of water and marine resources;
- The transition to a circular economy
- Pollution prevention and control;
- The protection and restoration of biodiversity and ecosystems.

Considering that nearly all of our activities already relate to EU Taxonomy 4.9 'Transmission and distribution of electricity' (NACE code D35.12), we have nevertheless assessed the eligibility on the remaining four environmental goals. Inspecting the list of other activities, we concluded that no additional relevant activity for TenneT was identified.

Reporting requirements

TenneT, subject to the Corporate Sustainability Reporting Directive (CSRD) via Part 9 of Book 2 of the Dutch Civil Code, is required to apply the EU Taxonomy Regulation 2020/852 in its corporate reporting as of reporting year 2021. As of 2022, and in accordance with these requirements, TenneT reported on its eligible contribution to the European Union's environmental objectives of climate change mitigation (CCM) according to the guidelines laid down in the EU Taxonomy. We reported the share of turnover, capital expenditure (CapEx) and operating expenditure (OpEx) that we have deemed 'Taxonomy-eligible' - irrespective of whether these activities met any or all the technical screening criteria stated in the Taxonomy. As of 2022, and in accordance with these requirements, TenneT reported on its eligible contribution to the European Union's environmental objectives of climate change mitigation (CCM) according to the guidelines laid down in the EU Taxonomy.

In reporting year 2024, TenneT determined whether its activities are taxonomy 'eligible' and 'aligned' for the environmental goal climate change mitigation. This builds on the 2021 'EU Taxonomy eligibility' by requiring the activities to meet additional criteria for:

- Substantial contribution to climate change mitigation;
- Do no significant harm (DNSH) to any other environmental objectives for those activities; and
- Minimum safeguards at the organisational level.

To this end, we analysed whether we met the requirements for these elements, based on the assessment performed in 2022 and updated this on certain elements. This relates to reviewing and assessing the technical screening criteria related to this economic activity, next to the review of the respective DNSH as included in the respective annex as well as the minimum safeguards to which the European Commission provided additional guidance in their final report of October 2022. Furthermore, we comprehensively analysed and screened our eligible economic activities and the turnover they generate, as well as our CapEx and OpEx, and determined the share that qualifies as Taxonomy-aligned.

For reporting year 2024, we leveraged on the 2022 assessments and updated them where required.

Basis for preparation

As indicated in Annex I to the Commission Delegated Regulation, article 1.2, the basis of how the KPIs are prepared, is included in our Integrated Annual Report 2024. This relates to the accounting policy (1.2.1), where is explained how these KPIs were determined and how the allocation has been performed. As nearly all of our activities are related to EU Taxonomy 4.9 'Transmission and distribution of electricity', allocation to different economic activities is not applicable. This is because our primary tasks are to provide electricity transmission services and system services and to facilitate the energy market. Those economic activities are linked to NACE code D35.12 and are concluded to substantially contribute to climate change mitigation, since TenneT is transmitting and distributing renewable energy in line with Directive (EU) 2018/2001, including necessary reinforcement or extension of the grid in line with technical screening criterium 4.9 'Transmission and distribution of electricity' on climate mitigation, as per Commission Delegated Regulation (EU) 2021/2139 of 4 June 2021 Annex I. In this Integrated Annual Report, we have reported that by connecting offshore operations and a selection of renewable energy sources directly to our grid, we have been able to provide 14.5 million equivalent households to switch to 100% renewable energy. Furthermore, we reported that we together with our partners in the energy sector, such as generating companies and distribution system operations, avoided 18 million tonnes of CO_2 equivalents. The regulated activities are as such EU Taxonomy eligible activities (in the table known as activity A) and the non-regulated activities are EU Taxonomy non-eligible activities (in the table known as activity B).

The subsequent phase involves demonstrating 'alignment with the EU Taxonomy'. This requires, in addition to the eligibility assessment, an evaluation of compliance with DNSH criteria

as outlined in technical screening criterion 4.9. This criterion belongs to environmental objectives such as 'climate change adaptation', 'transition to a circular economy', 'pollution prevention and control', and 'protection and restoration of biodiversity and ecosystems'. The environmental objective of 'water and marine resources' is deemed inapplicable according to the guidance provided in criterion 4.9.

We assessed the DNSH criteria for climate adaptation, circular economy, pollution prevention and biodiversity and concluded that our activities meet the do no significant harm criteria for the other environmental objectives. In terms of *climate adaptation*, for instance a screening of which physical climate risks may potentially affect the economic activity ('transmission and distribution of electricity') was performed. Ensuring that the electricity grid can perform under a variety of different circumstances is a standard procedure when designing- and building our grid. Information on *circular economy* can be found in the 'Our performance 2024' chapter and the environmental section of our sustainability statements. TenneT not only transmit electricity, but also is responsible for building and maintaining the high voltage electricity grid in the Netherlands and Germany. The legislation referred to in the *pollution prevention* DNSH is international legislation, which is the basis for national legislation. When we as TenneT build or maintain our grid and we need to do construction work, we must comply with the national, regional and local rules and regulations at all times. TenneT respects the norms and regulations to limit the impact of electromagnetic radiation on human health in the Netherlands and Germany. Regarding polychlorinated biphenyls (PCBs), we have internal policies to address this, such as performing tests related to relevant parts of our assets. Furthermore, it is a standard procedure for projects in the Netherlands and Germany, that an environmental impact assessment (EIA) is conducted, referring to DNSH on *biodiversity*. The first step is to identify the impacts of alternative routes through a so-called "assessment framework". Secondly, it is a mandatory part of the EIA to determine whether any negative impacts could be mitigated or prevented by acting appropriately. More information on biodiversity can be found in 'Our performance 2024' chapter.

In the absence of further guidance from the European Commission, the TenneT's minimum safeguards assessment was based on the "Final Report on Minimum Safeguards" published by the Platform on Sustainable Finance (PSF). TenneT meets the minimum safeguards criteria through its existing internal processes and guidelines, referring to human rights, corruption, taxation and fair competition. For more information please refer to the 'Our performance 2024' chapter or the governance and social section of the sustainability statements.

Both turnover and operational expenditures are based on underlying financial information as disclosed in note 2 'Segment information' of the consolidated financial statements and as used in the director's report. Capital expenditures are based on IFRS financial information as they do not differ with underlying financial information.

There were no changes to the application of calculations compared to the previous reporting period, nor material changes to the implementation of the CapEx plans. We consider Annex 1, articles 1.2.2.1c, 1.2.2.2., 1.2.2.3 and 1.2.3 to be not applicable to our situation, with the exception of the key information about our CapEx plans related to our Taxonomy eligible and aligned activities. Please note that we deem the risk of double counting not applicable our eligible economic activities only relates to one activity (the aforementioned NACE code D35.12). More information on our investments, can be found in the chapter 'Building the electricity grid of tomorrow' of the director's report. These investments contribute to a future green energy system, related to the EU's environmental goal of climate change mitigation. Significant research and development and innovation activities are mentioned in the 'Our performance in 2024' section of this report.

Our additional disclosures are therefore related to how these KPIs were determined and how the allocation has been performed.

Scope of sustainability reporting

For sustainability reporting purposes, TenneT consolidates data in line with the scope of our report as set out in About this report. The EU Taxonomy includes reporting of entities that are consolidated in the Group's consolidated financial statements, in line with the requirements of IFRS 10 'Consolidated financial statements'. As such the EU Taxonomy reporting scope is limited to our subsidiaries. Joint ventures and associates are not included for EU Taxonomy purposes as no turnover, OpEx and CapEx are recognised in the consolidated financial statements, because of accounting under the equity method for these types of investments.

Data point	Unit	2024	2023	% 2024/2023
Taxonomy-aligned revenue	%	97.4%	97.8%	100%
Taxonomy-eligible revenue (not Taxonomy-aligned revenue)	%	2.1%	1.7%	124%
Turnover of Taxonomy- non-eligible activities	%	0.5%	0.5%	100%
Total revenue (Turnover)	**EUR million**	**8,430**	**9,222**	91%
Taxonomy-aligned CapEx	%	100.0%	99.8%	100%
CapEx of Taxonomy- non-eligible activities	%	0.0%	0.2%	0%
Total CapEx	**EUR million**	**10,919**	**8,151**	134%
Taxonomy-aligned OpEx	%	99.9%	99.4%	101%
Taxonomy-eligible turnover activities (not Taxonomy-aligned activities)	%	0.1%	0.6%	17%
OpEx of Taxonomy- non-eligible activities	%	0.0%	0.0%	0%
Total OpEx	**EUR million**	**4,436**	**5,477**	81%

Taxonomy-aligned turnover

	Proportion of turnover / Total turnover	
	Taxonomy-aligned per objective	Taxonomy-eligible per objective
CCM	97.4%	99.5%
CCA	0%	0%
WTR	0%	0%
CE	0%	0%
PPC	0%	0%
BIO	0%	0%

Taxonomy-aligned CapEx

	Proportion of CapEx / Total CapEx	
	Taxonomy-aligned per objective	Taxonomy-eligible per objective
CCM	100%	100%
CCA	0%	0%
WTR	0%	0%
CE	0%	0%
PPC	0%	0%
BIO	0%	0%

Taxonomy-aligned OpEx

	Proportion of OpEx / Total OpEx	
	Taxonomy-aligned per objective	Taxonomy-eligible per objective
CCM	99.9%	100%
CCA	0%	0%
WTR	0%	0%
CE	0%	0%
PPC	0%	0%
BIO	0%	0%

Further details can be found in Additional EU Taxonomy disclosures.

Accounting policy

EU Taxonomy Turnover

Turnover for taxonomy-eligible activities (A. Taxonomy - eligible activities)

All regulated revenues are eligible to the EU Taxonomy turnover.

Determination of numerator for taxonomy – aligned turnover

All regulated revenues are aligned to EU Taxonomy, except the other revenues stream and the total share of the direct connections between our substation or grid and the network and a power production plant that is more greenhouse gas intensive than 100 gCO_2e/kWh measured on a life cycle basis. This turnover is excluded from the final calculation to determine the reporting metrics related to this regulation and this turnover is disclosed under A.2. Taxonomy-eligible but not environmentally sustainable activities.

Determination of denominator for taxonomy-aligned turnover

Total turnover as included in note 2 'Segment information'.

EU Taxonomy CapEx

CapEx for taxonomy-eligible activities (A. Taxonomy - eligible activities)

All regulated investments are eligible to the EU Taxonomy CapEx.

Determination of numerator for taxonomy - aligned activities

All investments are related to new connections to green electricity producers or other parts of the grid that are needed to transmit green electricity. The amount is based on the regulated investments and additions to the right of use assets, reference is made to the table hereafter.

Determination of denominator for taxonomy - aligned activities

Total of the investments and the right of use assets additions, reference is made to the next table.

Since we do not have any investments related to fossil power plants we have no CapEx disclosed under A.2. Taxonomy eligible but not environmentally sustainable activities.

EU Taxonomy OpEx

OpEx for taxonomy-eligible activities (A. Taxonomy - eligible activities) Based on the frequently asked questions from October 2022 (Commission Notice on the interpretation of the Disclosures Delegated Act from October 2022) and December 2022 (Second Draft Commission Notice on interpretation and implementation EU Taxonomy Climate Delegated Act from December 2022), the OpEx category is closely related to maintenance and repair and can include the following costs for: maintenance material, cost of employee repairing a machine, cost of employee cleaning a factory, IT dedicated to maintenance. In view of the above, TenneT has included grid related expenses in calculating the OpEx. This methodology has not been changed compared to our Integrated Annual Report 2022.

All regulated grid expenses are eligible to the EU Taxonomy OpEx.

Determination of numerator for taxonomy - aligned activities OpEx

All regulated grid expenses are aligned to EU Taxonomy, except the total share of the direct connections between our substation or grid and the network and a power production plant that is more greenhouse gas intensive than 100 gCO_2e/ kWh measured on a life cycle basis. These OpEx are excluded from the final calculation to determine the reporting metrics related to this regulation and are disclosed as OpEx under A.2. Taxonomy-eligible but not environmentally sustainable activities.

Determination of denominator for taxonomy - aligned activities OpEx

All grid expenses as included in note 2 'Segment information'.

(EUR million)	Notes	TSO NL	TSO DE	**Regulated**	Non-regulated	**Total**
Investments	2	3,783	6,852	10,635	2	10,637
Right of use assets	4	88	194	282	-	282
Total EU Taxonomy CapEx		**3,871**	**7,046**	**10,917**	**2**	**10,919**

Social

Our impacts, risks and opportunities in the social domain stretch beyond TenneT's borders. Alongside the impacts we have on our own workforce, we also have impacts upstream in our value chain. That's especially true for our activities in building the grid to support the energy transition, as we use contractors to construct and maintain our assets and they in turn make use of sub-contractors, and so on. We aim to ensure that everyone who works for and with us, especially those involved in ensuring our assets are properly designed, built, maintained and operated, can execute their work in a way that meets our standards and those of international conventions, such as the International Labour Organisation and the UN Guiding Principles on Business and Human Rights. Next to this, in fulfilling our core tasks and securing supply of electricity to power and empower society, together with all our value chain partners, we create societal impact for (large) industries and end-users in the areas we serve.

Performance tables - social topics

	2024				2023	
	DE	NL	NR	**Total**	DE	NL
Headcount Own workforce - Employees	4,966	3,383	134	**8,483**	4,132	2,805
Headcount Own workforce - Non-employees	346	998	12	**1,356**	370	1,029
TRIR	5.7	1.9	N/A	**4.0**	6.1	2.3
% of supplier visits meeting our standards				**77%**		
Grid availability	100.00000%	99.99988%	N/A	**99.99988%**	99.99993%	100.00000%

NR = non-regulated

Governance

The way TenneT governs social impacts, risks and opportunities is described in the General section of the Sustainability Statements. For the topics regarding S1 Own Workforce (including Health and Safety), S2 Workers in the Value Chain and the entity specific topic 'Security of supply', the overall accountability resides with our Executive Board. For each topic, the Executive Board delegates accountability to the directors of TenneT's units. This ensures that the right policies and actions are carried out in alignment with strategic company objectives, and assigned to owners with responsibility for the results on these topics. For S1 Own Workforce, this relates to our People (PPL) department; for Health and Safety this relates to our Health, Safety and Environment (HSE) department. Human rights is governed as part of our sustainability framework. Our Executive Board is accountable for this topic and on a daily basis this is shared with our Strategy and Partnerships unit. As elements of a human rights policy require the attention and efforts of several units within the organisation (such as risk, supply chain management, legal and compliance), multiple teams are responsible for parts of its implementation. However, the overall accountability of the topic lies with the director of Strategy and Partnerships (STP). For the topic of Security of Supply, our System Operations (SOP) unit has the assigned accountability, with the exception of the topic of customer connection topic, which is delegated to the Customer

Connection & Capacity unit. Note that for the topic of Health, this is currently split over two units as the vitality part is assigned to the PPL department and occupational health is assigned to HSE.

Managing our own workforce to us means also engaging properly with them. That is why meetings with worker representatives are held at least 3 - 4 times a year. More meetings are held for specific occasions. In the Netherlands our 'Ondernemingsraad' and in Germany our 'Betriebsrat' are involved. Our policy is to involve them prior to the decision making of important matters, such as with respect to organisational changes, updates to our company strategy and new collective labour agreements. Representatives of our Executive Board are also involved in these meetings. The rights of the people that work for and with us are important to us. In our human rights policy, we have included our commitments on this, which are championed by international human rights standards and conventions like the international bill of human rights and the ILO declaration on fundamental principles and rights at work. An example of this is how we are committed to respect the rights of our own workers and those working in our value chain as a signatory member of UN Global Compact, where we report on our progress on an annual basis. We are working hard to fulfil our commitments with respect to the environmental, social (e.g to respect human rights and labour rights, such as elimination of discrimination and the inclusion of vulnerable groups of employees) and governance domain.

Furthermore, we have processes in place to provide for or co-operate in the remediation of negative impacts of our own workforce, as well as channels available for our own workforce to raise concerns and to address them if applicable. Through various channels our own workforce is able to voice them. Examples include our Speak Up portal and our incident reporting portal Zenya. These are communicated to our employees and we encourage them to make use of them if something occurs. For instance via periodic campaigns and upon onboarding of our own workforce. We also provide for remedy when a matter is flagged. For instance when an unsafe working environment matter is flagged, this issue is addressed by the respective unit and investigated. Where measures are taken, this is communicated on to the respective colleague. For more information on this, refer to our Compliance and integrity section. We also continue our efforts to gain insights and engage with workers in our value chain. Through multistakeholder initiatives, such as the Worker welfare group, our International Responsible Business Conduct partnership and on certain projects we also had engagement lunches with workers.

Strategy

TenneT's own workforce consists of 9,693 people (of which 4,381 are in the Netherlands and 5,312 in Germany). Many others, who work for our contractors, also help us build the electricity grid of tomorrow. The social elements that affect them and impact us are related to their working conditions (including safety) and the availability of sufficient talent in the energy sector to realise the energy transition. These impacts, risks and opportunities have been identified in our double materiality assessment. For more information on how they originate from or are connected to the company strategy and business model, please refer to the General section of our sustainability statements and in the Our purpose, promise and principles and our strategy section of our Executive Board report. IROs like Sustainable supply chain practices (Human Rights) is included in the updated Sustainability Framework 2030, which is a further refinement of the boundary condition sustainability. In addition we are steering upon the sustainability topic in 2024 starting with metrics related to Climate, which is included in our quarterly group KPIs in the Integrated Performance Report process. The sharpened company strategy has been discussed with the works council before it has been finalised to obtain the views from the employee representatives.

The energy transition is a significant challenge society is facing which requires significant recruitment by TenneT, and others in the energy sector. It is expected that in the Netherlands alone, the industry will require several thousands more additional people to meet this challenge. That is why the ability to attract new employees for us and others in our value chain is a very important factor in our ability to deliver. Working further towards being an inclusive and diverse organisation will enhance TenneT's image as employer of choice. Given the amount of talent required to deliver the energy transition and to ensure we are delivering grid capacity in time for our customers, we cannot simply focus on recruiting future employees just within the borders of the Netherlands and Germany but also need to be welcoming to talent from other parts of the world as well to work in our offices, in the fields or other places our assets are located. But attracting talent isn't enough; employee retention and especially the safety of our workforce and workers in the value chain is also a very important topic to us. We need to ensure that all our people return home safely from work every day. Safety is one of the most salient rights for people in our workforce and in the value chain. However, we have identified other salient rights related to labour rights (decent wages, working hours, collective bargaining and prohibition of forced labour) and social rights (adequate housing).

Another part of our updated company strategy is related to the requirements on securing supply of electricity for our customers. The impact we have is twofold, as it means that we aim to be able to transmit electricity to power and empower our customers and via DSOs also their end-users. This is part of the boundary condition on being able to ensure reliability of the electricity grid of the connected customers.

Next to this, it also relates to the ability to connect customers to our high-voltage electricity grid. This is a central part of our strategy as to deliver grid capacity in time for our customers is the strategic goal we are aiming for. This is translated

into strategic priorities such as 'Build the grid faster' to build more customer connections and 'Utilise the grid better' by for instance unlocking new flexible customer agreements.

Impact, risk and opportunity management

To appropriately manage the impacts we have in the social domain, we describe the policies and actions we have set up as well as the targets and metrics to measure our progress on these items to ensure we are meeting our strategic goals.

Policies

S1 Own workforce

The policies that impact our own workforce and workers in the value chain relate to the policies of our PPL unit and specifically those related to safety of our HSE unit. With respect to the impact of human rights, these policies are developed and maintained by our STP unit. Our people policies, have been set out in our PPL plan 2024, where we have identified our strategic goals, objectives and key deliverables on how we aim to manage our own workforce. Next to this, there are other policy documents, such as our Inclusion, Diversity and Equity policy and the Workforce Plan 2025-2030 where we have set out our focus areas for the years after. The focus of our plan is on achieving the desired growth targets, planning ahead and managing our talents in a diverse, inclusive and safety oriented culture, next to achieving operational excellence with respect to our HR services to our colleagues.

S1-14: Health and Safety

Regarding our safe working environment, workplace safety is an important element for TenneT. Our corporate Health, Safety and Environment (HSE) policy is established, implemented and aims to provide safe and healthy working conditions, to prevent work-related injuries and illnesses, to minimise the environmental impact of operational activities, to comply with applicable legal and other HSE-related requirements, to eliminate hazards and reduce HSE risks, and to continuously improve the corporate HSE management system and HSE performance. In addition, the HSE policy provides a framework for defining our company's HSE objectives, directives, and processes. This mitigates the negative impact of our activities should we fail to create a safe working environment. The scope of this policy applies to the entire TenneT organisation, across all business segments and business units. Our Executive Board is accountable for this topic and on a daily basis this is shared with our HSE unit. To ensure we are able to create this safe working environment, all employees and units are expected to take responsibility for the day-to-day application of the policies set out by our HSE unit, especially considering the aforementioned increased risk related to the working environment, with the operating units related to our large projects and grid field operations.

S2 Workers in the value chain

With respect to the impact on the workers in the value chain, our human rights policy applies to all our operations which includes our own activities and our upstream activities (products being constructed by our business relationships). It also applies to our suppliers and contractors, in addition to our own employees, wherever they are. Our salient rights such as forced labour and social rights are addressed in our policy. This is also part of our supplier code of conduct, which is publicly available on our corporate website. As we develop our human rights policies further and pursue the right course of action, we recognise that we're on a long-term pathway, so we have focused our attention on the salient rights of workers in the value chain. Our human rights policy is publicly available via our corporate website, either in English, Dutch or German. We also embed this policy in our supplier code of conduct and our sustainability documentation. Our remedial process starts with a platform where grievances can be raised. At TenneT, we have our Speak Up portal which acts as our grievance mechanism and is open to everyone, including those outside of TenneT. It is now available in three languages and we will evaluate if it is as effective as it can be or needs any improvements. This is also present in our supplier code of conduct and ensures that our suppliers and contractors are aware of it. In the 2GW Program framework agreements, we have specific criteria that require the supplier to have a robust due diligence process in place including a grievance mechanism. In addition, during the qualification audits for suppliers, we look at mechanisms where stakeholders concerns can be raised/addressed. As a part of our strategic roadmap, we aim to work on building a robust due diligence process and embed processes to reflect remedial policies by 2030. Due to the novelty of this topic, TenneT does not yet have a robust process in place to test the effectiveness of our grievance mechanisms. However, we currently include this topic during site visits to better understand reporting of grievances and intend to develop a more mature grievance process in the coming years.

TenneT remains committed to engaging with value chain workers, as well as other relevant stakeholders, to improve our management of human rights within the supply chain. Our approach, however, and the development of a structured process around this, is not yet formalised in our policy document. Our engagement occurs through multiple channels. We engage directly during our site audits, yard visits and worker engagement lunches. This has led us, for example, to validate the accuracy of salient human rights issues in our supply chain. Through worker engagement, we have gained more informed insights into how certain issues could impact workers in our supply chain. Additionally, TenneT's participation in Multi Stakeholder Initiatives also helps us engage with credible stakeholders, such as NGOs. For example, in 2024 we jointly worked together in the Singapore Worker Welfare group. Together with BP, Equinor, Ørsted, Shell, TenneT and Petrobras, this partnership focused on labour rights and worker welfare requirements within the marine construction sector in Singapore. We have developed a set of principles and guidelines to support the Singapore marine construction sector to meet

international standards for worker rights and worker welfare, particularly focusing on responsible recruitment, improved accommodation, better transport, and improved access to grievance mechanisms. We have engaged with key stakeholders to advocate for systemic improvements and are also working with local organisations to facilitate access to remedy for workers who have suffered harms. We aspire to extending these endeavours working closely with relevant stakeholders to affect system change fostering equitable treatment regardless of supply chain location. A lot of direct engagement occurred during our process of identifying salient rights and drafting our strategic roadmap, with impacts on the outcomes of both. For example, it led to a more thorough understanding of addressing modern slavery, which is currently one of the main focus points in our human rights strategy.

For the topic of security of supply, ensuring that society is able to have a secure supply of electricity at any point in time is of vital essence for the people living in the areas we serve and the respective economies to flourish. This is not just the task of a transmission system operator (TSO) in the Netherlands or Germany, but the common task of all TSOs in Europe. The impact to provide a secure supply of electricity the policies are related to policies set on multiple levels. It starts with European legislation, such as the System Operation Guideline (SOGL), or European energy law, which has to be transferred to national legislations, like the energy laws. Besides that, European TSOs have to fulfil also European contracts such as the Synchronous Area Framework Agreement (SAFA). These policies set out the way how we need to fulfil our core tasks in co-operation with the other European TSOs. Those legislations and contracts define the key objectives and processes of our daily work. Those are internally translated into several policies such as business directives, corporate policies and work instructions to ensure that we are compliant to these European and national laws. In both Germany as in the Netherlands we have a framework of policies that guide us in meeting our societal task. The scope of these policies relate to specifically TenneT TSO entities, as this impact is driven by these parts of the company and describe how our operators have to run our internal systems/tools and processes to make our contribution to the European energy system and security of supply. In setting or implementing these policies, we are committed to the standards set by third parties, such as our regulators and technical institutions such as VDE (indicating the relationship and procedures between TSO and DSO), BDEW with MaBis regulation, which indicates the standards and procedures with respect to data exchange and accounting between Business Responsible Parties (BRPs) and TSOs. Our external stakeholders are deeply involved, via consultations and workshops, in the development of European and national legislations, methodologies and processes, which results in the relevant policies.

With respect to connecting our customers to the electricity grid, our newly set up Customer Connections & Capacity (CCC) unit has defined the following directions for our policies to accelerate this. The focus is to strengthen and expand the existing grid, maximise the utilisation of the existing capacity (by means of flexibility) and to increase 'self-reliance'. These concepts are the basis of the approach that transcends unit lines in our aim to accelerate the number of customers that is being able to be connected to the high-voltage grid.

Actions

Own workforce

To make progress, we have focused our attention on key actions that we defined as a result of the aforementioned policies. Regarding policies related to our own workforce, the actions are focused on the realisation of the growth targets, planning ahead, obtaining feedback within our own organisation on Inclusion, Diversity and Equity in our company culture and further support our leaders at all management levels in their leadership development.

S1-14: Health and Safety

With respect to a safe working environment, we have several key actions. These are included in our HSE Roadmap that focus on achieving a fully implemented HSE management system, improving safety leadership by ensuring all leaders are trained on Safety Needs our Energy, on 'life saving rules' with the aim to reduce them in comparison to 2023, Safety Tops engagement at executive management level with our contractors, Safety weeks, Safety Project Start-ups and various other activities performed in our daily operations to ensure a safer work environment.

These actions with respect to our own workforce are part of our annual business plan and do not require significant OpEx or CapEx.

S2 Workers in the value chain

Also regarding our workers in the value chain, actions were planned and executed to create a more robust due diligence processes in line with international human rights standards. For example, we have conducted a country-based risk assessment, mapped our salient human rights, and further developed an automated tool to assess the human rights risks among our suppliers and business partners. This helps us to better understand our own human rights impacts, risks and dependencies. These are just some of the actions we have taken regarding due diligence, rather than a comprehensive overview of all of them. These actions are examples of how we make progress on the topic of human rights. A more systematic approach, including how we track the effectiveness of our actions, is a next step. Also for the actions taken with respect to the workers in the value chain are part of our annual business plan and do not require significant CapEx or OpEx.

Entity specific: Security of supply

The actions that have been defined to address the impact related to security of supply relate to maintain the frequency

at 50 hertz with our balancing services – dimensioning, procurement and activation of balancing reserves, keep n-1 security, facilitate the electricity markets by operational planning, capacity calculation and congestion management, maintain voltage levels on all our connections and to find solutions to build more customer connections. Examples of this relate to the activities we need to do on a daily basis such as by forecasting supply and demand of electricity accurately and ensuring reserves are appropriately managed reserves such as the FCR, aFRR, mRR. Also, actions related to voltage control and facilitating the electricity market by initiatives such as having TenneT involved with (European) projects such as PICASSO or GOPACS and MARI or having an active role in capacity calculation for regions like CORE and HANSA or market related processes like SDAC and SIDC. Besides that, TenneT runs initiatives like GOPACS or Control Room of the future to improve our own processes and tools to secure energy supply today and tomorrow.

The scope of these key actions are predominantly related to our own operations, however there is a strong connection to up- and downstream parts of the value chain related to the transmission of electricity, especially in actions taking in light of facilitating the markets and balancing supply and demand. Most actions relate to tasks we need to fulfil every day, however actions defined to secure supply not only today but also tomorrow stretch to the years ahead of us. The results of these actions are visible on a daily basis as they have an effect on both customers, end-users and others affected. In securing supply, the more accurate we are able to perform our actions, the less measures we need to take we did not foresee, such as curtailment or redispatch. This also aims to reduce costs for all customers related to grid fees, due less mitigation measures to keep operational security. Or by having a positive effect on energy prices due to facilitating markets across Europe, creating a basis for competition between market parties. With respect to facilitating the market, an example is the progress we made in respect to the hybrid interconnector LionLink.

Actions planned and taken in light of strengthening and expanding the grid relate to shortening the contract process and setting up decentral coordination teams. With respect to utilising the grid better, actions are related to the utilisation of existing grid capacity by means of flexibility. Examples of this include setting up decentral flexibility contracts and working on grid enhancing technologies (power flow control) to increase self-reliance. The costs incurred with these actions are related to our grid expenses, such as our redispatch costs. More information is disclosed on this in Note 25 Operating expenses, where we provide more detailed information on our grid expenses on page 236.

Targets

S1 Own workforce

The targets set to meet our strategic objectives related to our own workforce relate to ensuring that our attrition rate aligns with industry standards and that we have all key positions identified for succession planning. To monitor whether we are on track of our inclusion, diversity and equity ambitions, we monitor the percentage of female inflow and non-Dutch / non-German inflow. Our aim for 2024 was that 32% of all our new hires is female and that at least 10% is non-Dutch / non-German.

S2 Workers in the value chain

We track the effectiveness of our actions regarding safety via the outcome of our TRIR metric. It relates to the policy objective of providing safe and healthy working conditions for the prevention of work-related injuries and illnesses. A lower TRIR reflects a safer environment. The target is set by the HSE unit which sets an annual target for the upcoming year. The corporate target for 2024 is 3.7, which is the rate of TRI per 1 million hours worked. To assess the current TRIR performance and establish a TRIR target, the HSE unit collects and analyses data from the previous 12 months. Based on the data analysis, the HSE unit formulates a recommendation for a new TRIR target. This target reflects the desired level of safety performance for the upcoming period. The proposed TRIR target is then presented to the Executive Board for review and approval. This step ensures that the target aligns with the organisation's safety and business objectives. This target is used to track TenneT's safety performance on a monthly basis. It is discussed at unit level and within management unit performance dialogues with EB members to identify any lessons or improvement based on the performance. Targets have been defined with a time horizon longer than one year, however progress is mainly managed in relation to the annual target on a corporate level. We have not set a baseline year, against which we can track our progress over time. No stakeholders have been involved in setting the target. The status and trend analysis of TenneT's HSE KPI performance is documented in our monthly and quarterly HSE reports. This is reviewed by the management teams in the respective units every month and quarter. The HSE management team and the Executive Board and Supervisory Board review on a quarterly basis. Note that in comparison to 2023, we now have a new definition of medical treatment cases which applies from 2024. This also aligns with industry best practice. Human rights issues or incidents we experienced in 2024 has been disclosed in our Management Board report. For more information on this, please refer to the human rights section in the 'Transition to a brighter energy future within social and planetary boundaries' chapter

In 2024, we have been working on developing a metric that provides us with deeper insights in the progress regarding our efforts to manage the salient rights of workers in our value chain, but this is still under construction. That is why the number of supplier visits remain the current metric we report on. The target we have set on this is 0% of all new

suppliers that have been accepted fail to meet our criteria such as regarding quality and sustainability related aspects (which also includes human rights related topics such as a safe working environment).

Entity specific: Security of supply

With respect to security of supply, we have set targets on an annual basis for the amount of time we deem to be acceptable of interruption on an annual basis. To us, we feel that every minute security of supply is interrupted is a minute we want to prevent, however we are aware that unfortunately circumstances can occur that this does happen. For both the SAIDI as the ASIDI the target is 0 minutes for our onshore operations, with the exception of 2 minutes for the Dutch 110/150 kV grid. For our offshore operations, we have a different target as we understand that the grid is secured differently (not N-1 redundancy secured), which has an impact on the extent to which we are able to secure supply. The target for offshore grid availability is 432 hours in total the system to be interrupted which we assess our performance against.

Considering the new energy world we currently encounter, including the tremendous amounts of connection requests, we are currently setting improved targets. This relates to the number of customer connections realised, as a target on the number of customer requests does not make sense as we do not aim to have a certain amount of requests. The current target is to connect 36 customers in 2024.

For all targets, the scope applies to our service area in the Netherlands and in large parts of Germany. We currently do not have a baseline value to which we evaluate our current year performance against, and not for all metrics we have a target we work towards on the medium or long-term, like e.g. the TRIR. Stakeholders were not involved in setting these target and there were no changes to the methodology in setting these targets. The performance is evaluated against the target on a quarterly basis as part of our Integrated Performance Reporting process, which the relevant units, the Executive Board and Supervisory Board review the group KPIs where this is included in. Once we identify any violation, we immediately analyse the root cause and initiate countermeasures to meet the target again.

Metrics

In the tables hereafter the metrics related to S1.6, S1.7 and S1.9 are disclosed. The diversity metrics related to S1.9 gender distribution at top level consist of the Executive Board, the Supervisory Board and the Senior Leadership Team of TenneT. The Executive Board consists of four members, two male (50%) and two female (50%). The Supervisory Board consists of six members, four male (67%) and two female (33%). The Senior Leadership Team consists of 25 directors, 17 male (68%) and 8 female (32%).

2024

Number of employees	Unit	Female				Male				Other				Not disclosed				Total			
		DE	NL	NR	Total	DE	NL	NR	Total	DE	NL	NR	Total	DE	NL	NR	Total	DE	NL	NR	Total
Permanent	Headcount	1,207	837	34	**2,078**	3,211	2,442	88	**5,741**	-	-	-	**-**	-	-	-	**-**	4,418	3,279	122	**7,819**
Temporary	Headcount	238	26	5	**269**	309	78	7	**394**	1	-	-	**1**	-	-	-	**-**	548	104	12	**664**
Non-guaranteed employees	Headcount	-	-	-	**-**	-	-	-	**-**	-	-	-	**-**	-	-	-	**-**	-	-	-	**-**
Total		**1,445**	**863**	**39**	**2,347**	**3,520**	**2,520**	**95**	**6,135**	**1**	**-**	**-**	**1**	**-**	**-**	**-**	**-**	**4,966**	**3,383**	**134**	**8,483**

2023

Number of employees	Unit	Female			Male			Other			Not disclosed			Total		
		DE	NL	Total	DE	NL	Total	DE	NL	Total	DE	NL	Total	DE	NL	Total
Permanent	Headcount	938	663	**1,601**	2,674	2,059	**4,733**	-	-	**-**	-	-	**-**	3,612	2,722	**6,334**
Temporary	Headcount	229	28	**257**	291	55	**346**	-	-	**-**	-	-	**-**	520	83	**603**
Non-guaranteed employees	Headcount	-	-	**-**	-	-	**-**	-	-	**-**	-	-	**-**	-	-	**-**
Total		**1,167**	**691**	**1,858**	**2,965**	**2,114**	**5,079**	**-**	**-**	**-**	**-**	**-**	**-**	**4,132**	**2,805**	**6,937**

		2024																			
Number of employees	Unit	Female				Male				Other				Not disclosed				Total			
		DE	NL	NR	Total	DE	NL	NR	Total	DE	NL	NR	Total	DE	NL	NR	Total	DE	NL	NR	Total
Full-time	Headcount	988	415	23	**1,426**	3,268	2,217	73	**5,558**	1	-		**1**	-	-		**-**	4,257	2,632	96	**6,985**
Part-time	Headcount	457	448	26	**931**	252	303	12	**567**	-	-		**-**	-	-		**-**	709	751	38	**1,498**
Total		**1,445**	**863**	**49**	**2,357**	**3,520**	**2,520**	**85**	**6,125**	**1**	**-**	**-**	**1**	**-**	**-**	**-**	**-**	**4,966**	**3,383**	**134**	**8,483**

		2023														
Number of employees	Unit	Female			Male			Other			Not disclosed			Total		
		DE	NL	Total	DE	NL	Total	DE	NL	Total	DE	NL	Total	DE	NL	Total
Full-time	Headcount	801	309	**1,110**	2,750	1,883	**4,633**	-	-	**-**	-	-	**-**	3,551	2,192	**5,743**
Part-time	Headcount	366	382	**748**	215	231	**446**	-	-	**-**	-	-	**-**	581	613	**1,194**
Total		**1,167**	**691**	**1,858**	**2,965**	**2,114**	**5,079**	**-**	**-**	**-**	**-**	**-**	**-**	**4,132**	**2,805**	**6,937**

		2024				2023		
Number of employees	Unit	DE	NL	NR	Total	DE	NL	Total
Employees under 30 years old	Headcount	1,082	340	16	**1,438**	915	241	**1,156**
Employees between 30 and 50 years old	Headcount	3,069	1,861	79	**5,009**	2,499	1,550	**4,049**
Employees over 50 years old	Headcount	815	1,182	39	**2,036**	718	1,014	**1,732**
Total		**4,966**	**3,383**	**134**	**8,483**	**4,132**	**2,805**	**6,937**
Employees under 30 years old	%	22%	10%	12%	**17%**	22%	9%	**17%**
Employees between 30 and 50 years old	%	62%	55%	59%	**59%**	60%	55%	**58%**
Employees over 50 years old	%	16%	35%	29%	**24%**	17%	36%	**25%**
Total		**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

NR = non-regulated

	Unit	2024 Target	2024 DE	2024 NL	2024 Total	2023 Target	2023 DE	2023 NL	2023 Total
Recordable incidents (TRIs)									
Own workforce - Employees	Number	N/A	24	6	**30**	N/A	33	5	**38**
Own workforce - Non-employees	Number								
Other workers on TenneT sites	Number	N/A	93	24	**117**	N/A	82	26	**108**
Total recordable incidents (TRIs)	**Number**	**N/A**	**117**	**30**	**147**	**N/A**	**115**	**31**	**146**
Lost-time injuries (LTIs)									
Own workforce - Employees	Number	N/A	13	4	**17**	N/A	15	1	**16**
Own workforce - Non-employees	Number								
Other workers on TenneT sites	Number	N/A	70	10	**80**	N/A	40	10	**50**
Total lost-time injuries (LTIs)	**Number**	**N/A**	**83**	**14**	**97**	**N/A**	**55**	**11**	**66**
Hours worked									
Own workforce - Employees	Million hours worked	N/A	7.2	6.4	**13.6**	N/A	6.1	5.6	**11.7**
Own workforce - Non-employees	Million hours worked								
Other workers on TenneT sites	Million hours worked	N/A	13.3	9.8	**23.1**	N/A	12.7	8.1	**20.8**
Total hours worked	**Million hours worked**	**N/A**	**20.5**	**16.2**	**36.7**	**N/A**	**18.8**	**13.7**	**32.5**
TRIR									
Own workforce - Employees	Incidents per million hours worked	N/A	3.3	0.9	**2.2**	N/A	5.4	0.9	**6.3**
Own workforce - Non-employees	Incidents per million hours worked								
Other workers on TenneT sites	Incidents per million hours worked	N/A	7.0	2.5	**5.1**	N/A	6.5	3.2	**0.0**
Total recordable incident rate (TRIR)	**Incidents per million hours worked**	**3.7**	**5.7**	**1.9**	**4.0**	**4.3**	**6.1**	**2.3**	**4.5**
Fatalities			**0**	**0**	**0**		**0**	**0**	**0**
Healthy workforce	Absentee rate[1]	**3.0**	**3.3**	**3.6**		**3.9**	**3.9**	**3.9**	

The definition of Total Recordable Incidents has been updated in 2024. More information on this is disclosed in the section Create a safe and inspiring workplace.

1 No target value for absentee rates, however a value TenneT strives for.

Details relating S1.14 for non-regulated companies are disclosed hereafter:

		Unit	Non-Regulated
Recordable incidents (TRIs)	Own workforce - Employees	Number	0
Lost-time injuries (LTIs)	Own workforce - Employees	Number	0
Hours worked	Own workforce - Employees	Million hours worked	0.2
TRIR	Own workforce - Employees	Incidents per million hours worked	0

Fatalities	**0**

Average FTEs	**2024**	2023
The Netherlands	2,978	2,523
Germany	4,306	3,625
NR	210	129
Total	**7,494**	**6,277**
Average FTEs according to the financial statements (note 26)	**7,494**	6,277
Difference	**-**	**-**

To measure our progress and performance regarding our safety strategy and policies, we measure the Total Recordable Incident Rate (TRIR) and the Lost Time Injury Frequency Rate (LTIF). Note that on our quarterly corporate internal dashboard, we focus on the TRIR. Both the TRIR and the LTIF are safety KPIs representing the number of accidents per million hours worked. Next to this, we disclose the mandatory metrics as described in ESRS S1-14. These are included in the aforementioned tables. The reporting entity of this KPI is TenneT and applies to the TenneT organisation as described in the scope on page 129, with the exception of BritNed (STP-BRN). The reporting frequency is quarterly and monthly. Note that in the aforementioned tables, we present the safety performance of our employees and non-employees in a combined manner due to unavailability of data. As of the reporting year 2025, we aim to present this separately.

For the data reported on the number of supplier visits and the amount of visits that resulted in a potential supplier that doesn't meet our requirements, the data is reported by our Supply Chain Management (SCM) department. The reported data relates to actual data based on the registration of visits performed in the reporting year and the respective reports on the back of these visits to determine the amount of suppliers that have been visited and passed the supplier visit, the ones that required a revisit and the ones that were not accepted as a supplier.

The metrics that enable us to monitor whether our policies and actions are effective with regards to securing supply of electricity are related to the so-called SAIDI (System Average Interruption Duration Index) and the ASIDI (Average System Interruption Duration Index). Both indicators provide the value to of to which extent we were unable to supply electricity to our customers and therefore our efforts and actions did not have the intended result. To evaluate whether our policies and actions to connect our customers faster to our electricity grid are effective, we have introduced two KPIs in 2024, which we have included in our corporate Integrated Performance Report for quarterly monitoring by the respective units as well as the Executive Board and supervisory Board as of Q1 2025 This relates to the number of customer requests and the number of customer connections realised. For 2024 these metrics were monitored but not included in our group performance metrics on a quarterly basis. They are included in the quarterly Internal Performance Report as of 2025. Based on the collected data over 2024, there were 40 customer connections realised and we have 728 number of customer requests outstanding as of the end of 2024.

For more information and examples on how we manage these impacts, refer to the chapters 'Utilise the grid to empower society', 'Create a safe and inspiring workplace' and 'Transition to a brighter energy future within social and planetary boundaries' in the Executive Board Report section of this report.

Methodology

S1 Own workforce

The data reported in light of S1 own workforce in the aforementioned tables relates to actual data based on our employee records accounted for in our local HR systems as reported by our PPL department. Our employee data is treated with care and in line with national and European data privacy information is used for the appropriate ends. Data collected in our HR systems is reported on a quarterly basis for the respective metrics. For our metrics to determine whether we meet our inflow and the ID&E (inclusiveness, diversity and equity) targets, we make use of data obtained upon hiring of our staff. This relates to all staff which we have an employment relationship with, in line with the definition as defined by the ESRS standards. For our non-regulated activities, we have included the total amount of employees of these respective companies and extrapolated certain data points. These entities together constitute less than 1% of our total workforce.

The TRIR is calculated by taking the number of ((TRI x 1 000 000)/(total worked hours)). The total of recordable incidents (TRI), in this context, represents the combined count of FAT (Fatalities), LWC (Lost Work Cases), RWC (Restricted Work Cases), and MTC (Medical Treatment Cases) that occurred over the defined period.

Regarding the worked hours that include hours of TenneT staff as well as contractor staff we apply the following methodology. Worked hours of TenneT employees are determined monthly by the human resource department (PPL) and reported to the Health, Safety and Environment department. Contractor employee hours are either estimated or based on actuals depending on the project. Contractor employee hours are determined quarterly by the contracting department and reported to the HSE department. The process consists of 1) determining the number of hours worked, 2) determining the number of HSE events and 3) consolidating data and calculating TRIR/LTIF. The methodology is aligned with industry best practices. The rate (and target) measures the number of incidents where our HSE management system applies, or where contractors execute work under the instruction and supervision based on our HSE management system, so called Mode 1 and 2 contractors. This aligns with our sector standards.

S2 Workers in the value chain

We define a value chain worker as "an individual performing work in TenneT's value chain to help us deliver the energy transition, regardless of their contractual relationship with TenneT. This includes all workers in our upstream and downstream value chain who are or can be materially impacted by TenneT and includes impacts resulting from TenneT's own operations, our value chain, and through our business relationships."

Within this scope, the groups of value chain workers that are likely to be materially impacted by TenneT are those working on our construction sites but who are not part of our own workforce (as they are, for example, employed by our contractors). It also includes workers in our upstream value chain who work on the products and services procured by us or for business partners contracted by us. This includes workers outside of Europe, such as in Singapore, India or Malaysia, who are working on assets required for the Dutch and German energy transition. Finally, it includes any workers in our downstream value chain who are working on TenneT activities but who are not employed by us. We currently focus on the workers up to this part in our value chain.

Within our group of potentially affected value chain workers, a particularly vulnerable group are migrant workers. This includes, for example, migrant workers who are employed by third parties to work for our sub-contractors on (upstream) asset construction, but can also include migrant workers working in the Netherlands or Germany on our project sites.

As with many companies, to determine an appropriate metric in this area and develop the quality of the data collection process is something that we are currently working on. This also applies to us and for the percentage of suppliers we visited that meet our standards. This metric will be updated in the next years to provide even more relevant information to us to provide insights on how we are progressing and is based on the records of our supplier visits of our Supply Chain Management unit. Due to the manual nature of the data collection process in this area, we report this as a best estimate.

Entity specific impact: Security of supply

The metrics that enable us to monitor whether our policies and actions are effective with regards to securing supply of electricity are related to the so-called SAIDI (System Average Interruption Duration Index) and the ASIDI (Average System Interruption Duration Index). Both indicators provide the value of to which extent we were unable to supply electricity to our customers and therefore our efforts and actions did not have the intended result. The grid availability definition includes both planned and unplanned outages, with the exception of our German onshore operations. The nature of our onshore and offshore grids differ, as our onshore grid are n-1 secured. This is why almost no planned outages are occurring on onshore-grids.

The SAIDI is calculated as a outcome of the number of interrupted customers/end-users (including GEN, DSO and HVC) multiplied against the duration of the interruption in minutes. That outcome is divided by the number of all connected customers/end-users. This calculation is in accordance with the 'handleiding Nestor elektriciteit' from Netbeheer Nederland, the association of system operators in the Netherlands.

The ASIDI is calculated by taking the measured power in MW just before the interruption, multiplied against the duration of the interruption in minutes. The outcome is divided by the installed apparent power in MVA of the DSO transformers plus the installed capacity of the high-voltage costumers and generators connected to TenneT's 220/380 kV grid, which is measured as of the 1st of January of each year.

The number of customer connections realised are based on project (milestone) data, where planning reports and progress reported in SAP is the basis. The customer connections are expressed in so-called "bays", which contain both new customer bays as well as capacity created by upgrading existing bays. For the number of customer requests, this is recorded by our Customer and Markets (CMT) unit, where each request is recorded in our internal CRM systems. These requests are done via our external website and can relate to a capacity request which requires either one or multiple fields. The data regarding the number of kilometres of new lines and cables is based on the milestone planning of individual projects, which is reported based on progress of the construction.

These metrics are used for internal reporting purposes and not validated by an external body other than the assurance provider.

Governance

Business Conduct

Although Business Conduct was not deemed as a material CSRD topic, TenneT has several policies in place, for example the Code of Conduct which sets clear guidelines for fair, integer and responsible behaviour. For more details, please refer to our Corporate Governance section. As we are committed to conducting our business activities with integrity, social and environmental responsibility, while acting in accordance with applicable laws, rules and regulations, we expect our suppliers to do the same. More insights in our Supplier Code of Conduct are outlined in the Social chapter of the Sustainability statements. Both documents can be found online on our website.

Due diligence process Executive Board

Roles and responsibilities

The law, Corporate Governance Code, the Companies Articles of Association, the Rules Governing the Supervisory Board and the Rules Governing the Executive Board (in conjunction with the Terms of Reference Executive Board) lay down the roles and responsibilities of SB, SB committees and EB regarding dedicated controls and procedures applied to the management of impacts, risks and opportunities. They are integrated with other internal functions in the way the EB portfolios are structured. The EB Board portfolios were for the greater part of 2024 as shown in the table at the bottom of the page.

Furthermore, the impacts, risks and opportunities are structured in TenneT's transformation to End-to-End (E2E) steering of TenneT's core processes. This is done in the following committees: the Asset Committee, the Future Design Committee, the System and Markets Committee and the Business Enabling Foundation Committee. These committees are responsible for the (sub)portfolio of improvement initiatives which relate to one or more E2E-processes, covering the entire TenneT process landscape and are described in more detail later in this report:

- Systems & Markets Committee: Operate the Electricity System & Enable the Energy Market;
- Future Design Committee: Design the Energy System;
- Asset Committee: Build the Electricity Grid & Maintain the Electricity Grid;
- Business Enabling Foundation Committee: all enabling processes.

In general, decisions are taken at the lowest possible level within TenneT, where the necessary competence and authority is available. Therefore also the portfolio and initiative steering tasks are distributed across all levels of the organisation, from teams to units, over programs and sub-portfolio boards up to these four committees.

All committees report to the EB in the Committee UPDs.

Systems & Markets Committee ("SMC")

The SMC is the internal platform for TenneT for all topics concerning, amongst others, market facilitation, system operations development, regional coordination and positioning on forthcoming regulatory issues within a period of 1 to 5 years. The SMC fosters TenneT's strategic ambitions to drive the energy transition, to ensure security of supply and to safeguard TenneT's financial health, by steering on harmonised positioning and representation towards external stakeholders. The SMC takes strategic decisions with impact on the topics within its scope.

CEO Manon van Beek	COO Tim Meyerjürgens	COO Maarten Abbenhuis	CFO Arina Freitag
PPL: People	LPG: Large Projects AC-GE	AMT: Asset Management	ARC: Audit, Risk Management & Internal Control and Compliance & Integrity
STP: Strategy & Partnerships	LPN: Large Projects AC-NL	BTO: Business Technology Organisation	BGD: Business Guidance
LEG: Legal Affairs	LPD: Large Projects DC	CCC: Customer Connections & Capacity	FGS: Financial Governance Services
PUC: Public Affairs & Communications	LPO: Large Projects Offshore	CMT: Customers and Markets	REG: Regulatory Affairs
	GFO: Grid Field Operations, Maintenance and (Baseload) Projects	ESP: Energy System Planning	SCM: Supply Chain Management
	HSE: Health, Safety and Environment	SOP: System Operations	

Future Design Committee ("FDC")

The FDC develops and communicates perspectives and scenarios as well as grid- and non-grid solutions on the future energy system to challenge conventional thinking. It appraises new energy concepts, proposes strategic partnerships and provides ideas for a fact-based dialogue with government, regulators, industry, academia and other stakeholders and can, for this purpose, establish working groups and nominate experts.

Asset Committee ("AC")

The AC decides and advises the EB on TenneT's grid investments and related maintenance to ensure the balance between security of supply, affordability and sustainability for the grid asset portfolio in relation to the organisation's strategic objectives. The AC is accountable for the management of the overall integrated grid asset portfolio both onshore and offshore. Its responsibilities range from solving the identified grid constraints to the realisation of both projects and strategic maintenance plans. In addition, the AC decides on all grid asset-related projects and strategic maintenance plans. It ensures a feasible and reliable integrated grid asset portfolio within the boundaries of the NEP (Netzentwicklungsplan) and FEP (Flächenentwicklungsplan), IP (Investeringsplan), strategic maintenance plans and availability of resources.

Business Enabling Foundation Committee ("BEFC")

The BEFC covers all initiatives to change and improve both existing business processes and IT systems as well as the introduction of (innovative) new processes and systems, which relates to the Enabling processes, as long as they do not have a direct impact on one of the core processes (and are therefore covered by another committee). A key priority of TenneT's enabling units is to provide a solid foundation. The BEFC shall amplify this focus and function as a decisive committee.

Target setting and monitoring

The EB oversees setting targets related to material impacts, risks and opportunities, through the Integrated Performance Plan that is related to TenneT's Strategy and has been approved by the EB.

TenneT's corporate targets are yearly discussed by the EB and the RAC and approved by the SB. They are reported on to the EB members in the unit performance dialogues, to the EB in the quarterly Committee Chairs updates (Asset Committee, Future Design Committee, System and Markets Committee and Business Enabling Foundation Committee). Progress is reported to the SB in the quarterly Integrated Performance Report, the Finance Report, the Quarterly Investment Report and the Audit-, Risk-and-Control and Compliance-and-Integrity Report. When targets have not been met, the cause, as well as mitigating measures are discussed. Where needed targets are sharpened for the following year to keep improving. Where needed, policies are updated to reflect (new) targets and actions to be taken, that will then be reported on and monitored as described before.

Besides the targets, the EB has various periodic updates on the impacts, risks and opportunities in the EB meetings. EB members discussed impacts, risks and opportunities with their direct reports in their regular meetings and unit performance dialogues. The EB discusses the monthly safety report and a safety incident report, including measures taken. There are also 'targeted' weekly meetings, such as the weekly safety meeting with COO Tim Meyerjürgens.

In the various quarterly reports (the Integrated Performance Report, the Quarterly Investment Report and the Integrated Audit, Risk and Compliance report, the EB and SB are informed by the respective directors/ TenneT-experts about the material impacts, risks, mitigating measures and opportunities.

In more detail the following topics are considered by the EB with respect to impacts, risks and opportunities:

Safe working environment

Relevant safety developments are discussed as the first topic in every EB meeting. The monthly safety reports are discussed together with a report about a specific incident where the EB focuses with the respective experts on the lessons learned and measures taken. The number of Life Saving Rules violations were discussed in every monthly safety report in combination with (negative and positive) consequence management. Psychological safety as well as the topic of mental health have been discussed, a.o. in relation to results of the targets in the quarterly reports (a.o. absenteeism) and the outcomes of the Pulse Surveys amongst TenneT employees. The topic of 'psychological safety', in the sense of feeling safe/ supported to speak up when certain project execution circumstances seem unsafe to progress, has also been discussed during one of the monthly incident dialogues. The 'Safety Needs Our Energy' training will for that matter be cascaded down to TenneT's tier 2 subcontractors (and further).

Security of supply

This topic is the second topic on the EBM agenda; it is reported upon every week. Incidents are discussed; lessons learned are shared, internally and externally, f.i. in the ENTSO-E meetings. TenneT published the yearly report Monitoring Security of Supply: this was discussed in the EB. The conclusions are:

- Compared to the previous edition of the Monitor, there is an improvement in security of supply in the years to 2030. Nationally, we see higher electricity demand and reductions in regulable capacity. Nevertheless, there is an improved security of supply, as production capacity in surrounding countries remains at the same level.
- After 2030, there is a marked deterioration in security of supply. This is mainly due to increasing demand for

electricity, while the supply from controllable coal and gas plants actually decreases. This, combined with lagging growth of flexibility in the form of demand response, batteries and new CO_2-free controllable capacity, leads to the reliability (expectation) standard of 4 hours being exceeded to more than 14 hours in base year 2033. These developments manifest themselves not only in the Netherlands, also in other countries this leads to increased interdependence.
- The importance of interconnectors to the United Kingdom or Norway, for example, will continue to be high after 2030.
- The EB discussed smart strategic choices for both the Dutch and German investment plans (Netzentwicklungsplan 2025 (2037-2045) and Investeringsplan 2026) in view of TenneT's increasing investment portfolio. The choices to be made will be aligned further with all relevant stakeholders (EZK, ACM, German TSOs, BSH and BNetzA).
- Climate change: This topic has been addressed several times, in the Climate transition plan, in the sustainability update as well as when discussing certain project choices, such as pilots for applying alternative gases for SF_6 gas in switchgear installations on substations, in relation to affordability of the electricity system and security of supply. Further reference is made to the topic of Emission Reductions hereafter.

Resource use and circularity

In the dialogue about the Sustainability update, the EB noted appreciatively that TenneT started a co-operation to use 100% recycled copper in transformers; has applied 'Sustainability' as award criterium in its Overhead Line Conductors tender and has increased its target for the use of circular copper. Improving on circularity will remain an important focus point for the years to come.

Responsible Supply Chain Practices

Supply Chain Due Diligence

Human rights are an important part of a responsible supply chain topic of TenneT's sustainability strategy. TenneT has an impact both upstream and downstream TenneT's value chain, ranging from procurement to asset construction, primarily across Europe, Asia and the Middle East. TenneT's biggest impact lies upstream and relates to our value chain workers. It's within TenneT's responsibilities to promote labour rights among our suppliers, and the most salient of these for TenneT include forced labour, decent wages, collective bargaining, occupational health and safety, working hours and social rights. This is especially critical as TenneT's project portfolio increases and we enter into more business relationships with partners in the Far and Middle East, where the risk of human rights infringements is higher. The topic of human rights is part of the Supplier Code of Conduct, which together with our Corporate Human Rights Policy forms the basis for our actions in this area. When we work with suppliers, we include human rights within TenneT's auditing and prequalification processes. If TenneT sees that a supplier falls short in any regard, they must submit an improvement plan before they can be shortlisted as a qualified supplier. Alongside this policy is our commitment to partnering with others to push for greater respect for human rights and leverage the power of collective action.

Emission Reductions

In order to facilitate the energy transition by building, operating and maintaining the transmission grid of the future, TenneT needs to procure large amounts of products and services. In order to achieve TenneT's target of reducing TenneT's scope 3 emissions by 30% by 2030, an internal programme called "Decarbonising Supply Chain" has been set up. The aims at developing and implementing sustainable sourcing strategies to promote committed action for reducing emissions along TenneT's supply chains while ensuring to avoid major impacts on the availability, affordability and quality of TenneT's procured products and services. TenneT's assets are produced along complex global supply chains. The majority of emissions in these supply chains does therefore mainly not occur at TenneT's tier 1 suppliers but even further down the supply chain, e.g. in extraction and refining of raw materials or in the production of semi-finished products. Stimulating TenneT's supply chains to reduce these emissions while not having direct control adds to the challenge of reducing TenneT's scope 3 emissions by 30%. This target becomes particularly challenging, taken into account the rapid growth in grid expansion and investments in the upcoming years. In order to facilitate the energy transition, an immense expansion of the high-voltage grid is necessary.

Good employment

Every quarter the EB discussed the outcomes of the Pulse Surveys. Further to the topics mentioned in the SB report about 'Good Employment', the EB discussed the finding that where the sharpened strategy is concerned, (i) cascading it down needs more emphasis, (ii) the need for End-to-End steering is seen and (iii) the value of the performance management framework is recognised.

Surveys have been conducted and measures have been taken regarding mental health. Despite that, the topic recurs. The CEO has taken action upon this topic.

The EB noted appreciatively that at the same time, employee motivation remains unwaveringly high. People felt more informed, supported and motivated compared to last year. The EB also picked up that there are significant differences between units; these were discussed in the Unit Performance Dialogues.

TenneT managed to attract 1,350 colleagues in 2024. Further awareness and attention for international hires and related ID&E targets and topics remain high on the EB agenda.

Of equal importance is retaining talent, which TenneT ensures by stimulating job rotation, a very good learning and development programme as well as a very competitive remuneration package.

Delivering the energy transition

The EB was closely involved in the update of TenneT's Target Grid, launched in April 2023. It is a strategic vision for high-voltage infrastructure in the Netherlands and Germany to achieve carbon neutrality by 2045. In 2024, the vision was updated to include higher grid granularity at the 110/150 kV level and expanded with two new components: Target Market and Target Operations, ensuring a more comprehensive and integrated approach to the energy transition. Using backcasting, Target Grid enables the development of a strategic course and the establishment of strategic KPIs to keep the organisation on track for its 2045 goals.

Position Paper AC and DC Overhead lines versus cables

Because the energy transition is also about affordability, security of supply and political/ public acceptance, TenneT established a position paper on the various disadvantages of cabling versus overhead lines (cables are more expensive in installation and maintenance and less secure than overhead lines).

The EB discussed the duration of land acquisitions for substations and agreed to start the use of coercive measures in an earlier stage, in parallel to amicable acquisition. By doing this TenneT projects will not unnecessarily be delayed by unwilling land owners.

Systems & Markets Committee (“SMC”)

In 2024, the SMC discussed the topics of Operate the Electricity grid and the Enable the Electricity Market. Both topics are part of the material topic security of supply. The Electricity Market Desing Reform, big disturbances, international strategy and alignment and the PMP portfolio are discussed in the SMC. The topic CCC fits both in the FDC and SMC.

The goals, objectives and key results of the committee take the strategy into account when selecting topics and prioritising. Having the objectives defined, and due to the fact that there is no infinite budget nor capabilities, therefore the SMC takes security of supply and compliance as pre-condition, when deciding on the priorities. Priorities are discussed in detailed in the portfolio board under the SMC objectives guidance.

The committees monitor the execution of key-results, and there are E2E processes KPIs (at this moment in the unit UPD). In addition, SMC also deals with strategic topics, such as international positioning and representation.

Future Design Committee (“FDC”)

"Delivering the energy transition" (for example NEP and IP approval) is the main material topic for the FDC besides others like "Climate change". In practically all discussions and decisions, their impact on this strategic target were monitored. Individual units in charge of specific CSRD topics will develop relevant policies etc. for these topics. The FDC is defining and setting the objectives for the end-to-end process "design the energy transition" yearly. Therefore the strategic goals of TenneT as well as of the strategic asset management plan are considered. If applicable – as mentioned mostly with regard to the objectives for improvement measures – the FDC closely monitors progress. Monitoring of the KPIs will be established in 2025.

Asset Committee (“AC”)

In 2024, the AC prepared EB decision making for projects with a value of > EUR 50 million and in the SB with a project value of > EUR 200 million. The AC discussed project choices, such as the routing of high-voltage connections, the default choice for overhead lines instead of cables (which choice impacts affordability and security of supply), locations of substations, applications of installations (Air Insulated Switchgear if possible) and choices related to safety and physical security. The various causes for project price increases (scope changes, general price increases, supplier’s market) were discussed with the EB and SB in various meetings, next to the earlier mentioned topics.

Material impacts, risks and opportunities reporting is part of the KPI reporting of the AC. As data quality has been low for certain KPIs, there has not yet been a regular reporting in the AC on the KPIs. Regular quarterly reporting will commence in 2025. Individual units in charge of specific material impacts, risks and opportunities will develop relevant policies etc. for these topics. For example, procurement strategies for SF_6-free assets or regarding circularity requirements for our suppliers are defined by AMT and SCM. The AC is involved when defining objectives (as part of the PMP process) for the next year. These newly defined objectives consider the company strategy and the newly revised asset chain strategy. Especially the new asset chain strategy provides guidance in case of applicable trade-offs. If applicable – as mentioned mostly with regard to the objectives for improvement measures – the AC closely monitors progress. Monitoring of the KPIs is mostly done at unit level.

Business Enabling Foundation Committee (“BEFC”)

In 2024, the BEFC informed the EB/ SB/ committees on an ad-hoc basis about material impacts, risks and opportunities. Regular quarterly reporting will start in 2025. Individual units in charge of specific material impacts, risks and opportunities develop relevant policies etc. for these topics. The BEFC is involved when defining objectives (as part of the Portfolio Management Process) for the next year. These newly defined objectives consider the company strategy and the newly revised Enabling Function strategy. Especially the new Enabling Function strategy provides guidance in case of applicable trade-offs. The Enabling Foundation closely

Capability matrix

Competencies	M.J.J. van Beek (CEO)	T.C. Meyerjürgens (COO)	M.C. Abbenhuis (COO)	A.C.H. Freitag (CFO)
General management	high	high	medium	medium
Financial management	medium	medium	medium	high
Capital market/ investor relations	high	medium	medium	high
Technology	medium	high	high	low
IT	medium	medium	high	medium
Risk management	high	high	high	high
Project management (large infrastructure projects)	medium	high	high	medium
Human resources	high	medium	medium	medium
Marketing/Public Affairs/ Brand image	high	high	medium	medium
Regulation	high	high	high	high
Public sector/State owned companies	high	high	high	high
Political/managerial experience and network the Netherlands	high	medium	high	high
Political/managerial experience and network Germany	high	high	medium	high
International background/ experience	high	high	high	high
Legal	medium	medium	medium	medium
Experience in energy-, industrial and/or financial sector	high	high	high	high
Knowledge of Dutch Corporate Governance Code	high	medium	medium	medium
Corporate Social Responsibility/ CSRD	high	high	high	high

● high ● medium ● low

monitors progress mostly with regard to the objectives for improvement measures. Furthermore, monitoring of the KPIs is mostly done at unit level.

Skills and expertise

The EB members have kept their knowledge up to date in their other executive- and non-executive roles as well as by attending external trainings and TenneT deep dives, dialogues and permanent education sessions. For the capability matrix of the EB, reference is made to next table

The impacts, risks and opportunities resort **mainly** within the following EB roles because of the on the first page of this section disclosed reporting lines:

Impacts, risks and opportunities	Main EB role and units
Safe working environment	COOs and CFO (LPG, LPN, LPD, LPO, GFO, HSE, AMT, ESP, SOP and SCM)
Climate change	CEO (STP) CFO (SCM) COOs (ESP, AMT)
Resource use and circularity	CEO (STP) CFO (SCM)
Responsible Supply Chain Practices	CEO (STP) CFO (SCM)
Good employment	CEO (PPL)
Delivering the energy transition	COOs
Security of supply	COO Maarten Abbenhuis

Appropriate skills and expertise are sufficiently available within TenneT's workforce. By working on impacts, risks and opportunities in a cross-unit way, TenneT's internal expertise is growing further. Where needed, there is sufficient access to external advisors through framework contracts.

Appendix

ESRS Reference table

General		Section/report	Page
Disclosure requirement			
ESRS 2 · General disclosures			
BP-1	General basis for preparation of the sustainability statements	General - Basis for preparation	129
BP-2	Disclosures in relation to specific circumstances	Environmental - Metrics Social - Metrics Appendix	148 167 178
GOV-1	The role of the administrative, management and supervisory bodies	Governance	173
GOV-2	Information provided to and sustainability matters addressed by the undertaking's administrative, management and supervisory bodies	Governance	173
GOV-3	Integration of sustainability-related performance in incentive schemes	Governance	173
GOV-4	Statement on due diligence	Governance	173
GOV-5	Risk management and internal controls over sustainability reporting	Governance	173
SBM-1	Strategy, business model and value chain (value-creation process)	General	129
SBM-2	Interests and views of stakeholders	General - Double materiality assessment	132
SBM-3	Material impacts, risks and opportunities and their interaction with strategy and business model	General - Double materiality assessment	132
IRO-1	Description of the processes to identify and assess material impacts, risks and opportunities	General - Double materiality assessment	132
IRO-2	Disclosure requirements in ESRS covered by the undertaking's sustainability statement	General - Double materiality assessment	132
MDR-P	Policies adopted to manage material sustainability matters	Environmental Social Governance	136 162 173
MDR-A	Actions and resources in relation to material sustainability matters		
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MDR-T	Tracking effectiveness of policies and actions through targets		

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Disclosure requirement			
ESRS E1 · Climate change			
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ESRS 2, SBM-3	Material impacts, risks and opportunities, and their interaction with strategy and business model	General - Double materiality assessment Environmental - Strategy	132 137
ESRS 2, IRO-1	Description of the processes to identify and assess material climate related impacts, risks and opportunities	General - Double materiality assessment Environmental - Strategy	132 137
E1-2	Policies related to climate change mitigation and adaptation	Environmental - Policies	137
E1-3	Actions and resources in relation to climate change policies	Environmental - Actions	139
E1-4	Targets related to climate change mitigation and adaptation	Environmental - Targets	145
E1-5	Energy consumption and mix	Environmental - Metrics	152
E1-6	Gross Scopes 1, 2, 3 and total GHG emissions	Environmental - Metrics	150
E1-7	GHG removals and GHG mitigation projects financed through carbon credits	Environmental - Metrics	153
E1-8	Internal carbon pricing	Environmental - Metrics	153
E1-9	Anticipated financial effects from material physical and transition risks and potential climate-related opportunities	TenneT makes use of the phase-in option, not disclosed in 2024	N/A
ESRS E5 · Resource use and circular economy			
ESRS 2, SBM-3	Material impacts, risks and opportunities, and their interaction with strategy and business model	General - Double materiality assessment Environmental - Strategy	132 137
ESRS 2, IRO-1	Description of the processes to identify and assess material climate related impacts, risks and opportunities	General - Double materiality assessment Environmental - Strategy	132 137
E5-1	Policies related to resource use and circular economy	Environmental - Policies	137
E5-2	Actions and resources in relation to resource use and circular economy	Environmental - Actions	145
E5-3	Targets related to resource use and circular economy	Environmental - Targets	145
E5-4	Resource inflows	Environmental - Metrics	155
E5-5	Resource outflows	Environmental - Metrics	156
E5-6	Anticipated financial effects from resource use and circular economy-related risks and opportunities	TenneT makes use of the phase-in option, not disclosed in 2024	N/A

	Social standards	Section/report	Page
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ESRS S1 · Own workforce			
ESRS 2, SBM-2	Interests and views of stakeholders	General - Double materiality assessment Social - Strategy	132 163
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S1-1	Policies related to own workforce	Social - Policies Create a safe and inspiring workplace	164 60
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S1-7	Characteristics of non-employees in the undertaking's own workforce	Social - Metrics	167
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S1-14	Health and safety metrics	Social - Metrics	167
S1-15	Work-life balance metrics	N/A	
S1-16	Remuneration metrics (pay gap and total remuneration)	N/A	
S1-17	Incidents, complaints and severe human rights impacts	N/A	
ESRS S2 · Workers in the value chain			
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ESRS 2, SBM-3	Material impacts, risks and opportunities, and their interaction with strategy and business model	Social - Strategy	163
S2-1	Policies related to value chain workers	Social - Policies	164
S2-2	Processes for engaging with value chain workers about impacts	Social - Policies	164
S2-3	Processes to remediate negative impacts and channels for value chain workers to raise concerns	Social - Policies	164

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S2-4	Taking action on material impacts on value chain workers, and approaches to managing material risks and pursuing material opportunities related to value chain workers, and effectiveness of those actions	Social- Actions	165
S2-5	Targets related to managing material negative impacts, advancing positive impacts, and managing material risks and opportunities	Social - Targets	166

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Disclosure requirement			
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MDR-P	Policies adopted to manage material sustainability matters	Social - Policies	164
MDR-A	Actions and resources in relation to material sustainability matters	Social- Actions	165
MDR-M	Metrics in relation to material sustainability matters	Social - Metrics	167
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Incorporation by reference

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	27(b)	Our stakeholders	24
	27(c)	Our stakeholders	24
ESRS S1, S1-6	50(c)	Create a safe and inspiring workspace	60

Datapoints that are derived from other EU legislation

Disclosure Requirement and related datapoint	SFDR reference	Pillar 3 reference	Benchmark Regulation reference	EU Climate Law reference
ESRS 2 GOV-1 21(d)	Not material		Not material	
ESRS 2 GOV-1 21(e)			Not material	
ESRS 2 GOV-4 30	Not material			
ESRS 2 SBM-1 40(d)i	Not material	Not material	Not material	
ESRS 2 SBM-1 40(d)iii	Not material		Not material	
ESRS 2 SBM-1 40(d)iii	Not material		Not material	
ESRS 2 SBM-1 40(d)iv			Not material	
ESRS E1-1 14				Environmental
ESRS E1-1 16(g)		Not material	Not material	
ESRS E1-4 34	Not material	Not material	Not material	
ESRS E1-5 37	Not material			
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ESRS E1-5 40 to 43	Not material			
ESRS E1-6 44	Not material	Not material	Not material	
ESRS E1-6 53 to 55	Not material	Not material	Not material	
ESRS E1-7 56				Environmental

Disclosure Requirement and related datapoint	SFDR reference	Pillar 3 reference	Benchmark Regulation reference	EU Climate Law reference
ESRS E1-9 66			Not material	
ESRS E1-9 66(a)		Not material		
ESRS E1-9 66(c)		Not material		
ESRS E1-9 67(c)		Not material		
ESRS E1-9 69			Not material	
ESRS E2-4 28	Not material			
ESRS E3-1 9	Not material			
ESRS E3-1 13	Not material			
ESRS E3-1 14	Not material			
ESRS E3-4 28(c)	Not material			
ESRS E3-4 29	Not material			
ESRS 2- SBM 3 - E4 16(a)i	Not material			
ESRS 2- SBM 3 - E4 16(b)	Not material			
ESRS 2- SBM 3 - E4 16(c)	Not material			
ESRS E4-2 24(b)	Not material			
ESRS E4-2 24(c)	Not material			
ESRS E4-2 24(d)	Not material			
ESRS E5-5 37(d)	Not material			
ESRS E5-5 39	Not material			
ESRS 2- SBM3 - S1 14(f)	Not material			
ESRS 2- SBM3 - S1 (14g)	Not material			
ESRS S1-1 20	Not material			
ESRS S1-1 21			Not material	
ESRS S1-1 22	Not material			
ESRS S1-1 23	Not material			
ESRS S1-3 32(c)	Not material			
ESRS S1-14 88(b) and (c)	Not material		Not material	
ESRS S1-14 (e)	Not material			
ESRS S1-16 97(a)	Not material		Not material	
ESRS S1-16 97(b)	Not material			
ESRS S1-17 103(a)	Not material			
ESRS S1-17 104(a)	Not material		Not material	

Disclosure Requirement and related datapoint	SFDR reference	Pillar 3 reference	Benchmark Regulation reference	EU Climate Law reference
ESRS 2- SBM3 – S2 11(b)	Not material			
ESRS S2-1 17	Not material			
ESRS S2-1 18	Not material			
ESRS S2-1 19	Not material		Not material	
ESRS S2-4 36	Not material			
ESRS S3-1 16	Not material			
ESRS S3-1 17	Not material		Not material	
ESRS S3-4 36	Not material			
ESRS S4-1 16	Not material			
ESRS S4-1 17	Not material		Not material	
ESRS S4-4 35	Not material			
ESRS G1-1 10(b)	Not material			
ESRS G1-1 10(d)	Not material			
ESRS G1-4 24(a)	Not material		Not material	
ESRS G1-4 24(d)	Not material			

Policies and other items

EB discussed and approved policies

In 2024, the EB discussed and approved (the updates of) the following policies:

- Corporate Policy External Power of Attorney and Internal Authorisation Rules Netherlands and Germany
- Climate transition plan
- Integrated Performance Plan
- Internal Audit Charter
- Corporate Policy Security
- Business Directive Life Saving Rules and Fair Approach
- Sustainability at TenneT
- Functional Description Customer & Markets Netherlands and Germany
- Functional Description Large Projects Offshore Netherlands and Germany
- Functional Description System Operation Netherlands and Germany
- Functional Description Strategy & Partnerships
- Mobility Policy
- Functional Description Customer Connections and Capacity
- Functional Description Legal Affairs Germany
- Functional Description Large Projects DC
- Functional Description Grid Field Operations Netherlands and Germany
- Functional Description Grid Field Operations Offshore Germany
- Functional Description Energy System Planning Netherlands and Germany
- Functional Description Energy System Planning Netherlands and Germany
- Terms of Reference Asset Committee Netherlands and Germany
- Terms of Reference Business Enabling Foundation Committee Netherlands and Germany
- Terms of Reference Future Design Committee Netherlands and Germany
- Terms of Reference Systems and Markets Committee Netherlands and Germany

Additional EU Taxonomy disclosures

Taxonomy-aligned turnover

Economic activity (1)	Code (2)	Turnover (in EUR million) (3)	Proportion of Turnover, year 2024 (%) (4)	Substantial contribution criteria: Climate change mitigation (5)	Climate change adaptation (6)	Water (7)	Pollution (8)	Circular economy (9)	Bio-diversity (10)	DNSH criteria ('Does Not Significantly Harm'): Climate change mitigation (11)	Climate change adaptation (12)	Water (13)	Pollution (14)	Bio-diversity (16)	Minimum safeguards (17)	Proportion of Turnover, year 2023 (%) (18)	Category enabling activity (E) (19)	Category transitional activity (T) (20)
A.TAXONOMY-ELIGIBLE ACTIVITIES																		
A.1 Environmentally sustainable activities (Taxonomy-aligned)																		
Transmission of electricity in the Netherlands	CCM 35.12	2,486	29.5%	Y	N/EL	N/EL	N/EL	N/EL	N/EL	Y	Y	Y	Y	Y	Y	29.4%	E	
Transmission of electricity in Germany	CCM 35.12	5,721	67.9%	Y	N/EL	N/EL	N/EL	N/EL	N/EL	Y	Y	Y	Y	Y	Y	68.4%	E	
Turnover of environmentally sustainable activities (Taxonomy-aligned) (A.1)		**8,207**	**97.4%**	**97%**	**0%**	**0%**	**0%**	**0%**	**0%**	**Y**	**Y**	**Y**	**Y**	**Y**	**Y**	**97.8%**		
Of which enabling		8,207	97.4%	97%	0%	0%	0%	0%	0%							97.8%	E	
Of which transitional		-														0.0%		T
A.2. Taxonomy-eligible but not environmentally sustainable activities (not Taxonomy-aligned activities)																		
Transmission of electricity in the Netherlands last mile to fossil power plant		20	0.2%	Y	N/EL	N/EL	N/EL	N/EL	N/EL							0.3%		
Transmission of electricity in Germany last mile to fossil power plant		159	1.9%	Y	N/EL	N/EL	N/EL	N/EL	N/EL							1.4%		
Turnover of Taxonomy-eligible but not environmentally sustainable activities (not Taxonomy-aligned activities) (A.2)		**179**	**2.1%**	**2.1%**	**0%**	**0%**	**0%**	**0%**	**0%**							**1.7%**		
A. Turnover of Taxonomy-eligible activities (A.1+A.2)		**8,386**	**99.5%**	100%	0%	0%	0%	0%	0%							99.5%		
B. TAXONOMY NON-ELIGIBLE ACTIVITIES																		
Turnover of Taxonomy- non-eligible activities		44	0.5%															
Total (A+B)		**8,430**	**100%**															

Y: Yes, Taxonomy-eligible and Taxonomy-aligned activity with the relevant environmental objective.

N: No, Taxonomy-eligible but not Taxonomy-aligned activity with the relevant environmental objective.

N/EL: not eligible, Taxonomy-non-eligible activity for the relevant environmental objective.

Taxonomy-aligned CapEx

Economic activity (1)	Code (2)	CapEx (in EUR million) (3)	Proportion of CapEx, year 2024 (%) (4)	Substantial contribution criteria: Climate change mitigation (5)	Climate change adaptation (6)	Water (7)	Pollution (8)	Circular economy (9)	Bio-diversity (10)	DNSH criteria ('Does Not Significantly Harm'): Climate change mitigation (11)	Climate change adaptation (12)	Water (13)	Pollution (14)	Bio-diversity (16)	Minimum safeguards (17)	Proportion of CapEx, year 2023 (%) (18)	Category enabling activity (E) (19)	Category transitional activity (T) (20)
A.TAXONOMY-ELIGIBLE ACTIVITIES																		
A.1 Environmentally sustainable activities (Taxonomy-aligned)																		
Transmission of electricity in the Netherlands	CCM 35.12	3,871	35.5%	Y	N/EL	N/EL	N/EL	N/EL	N/EL	Y	Y	Y	Y	Y	Y	33.8%	E	
Transmission of electricity in Germany	CCM 35.12	7,046	64.5%	Y	N/EL	N/EL	N/EL	N/EL	N/EL	Y	Y	Y	Y	Y	Y	66.0%	E	
CapEx of environmentally sustainable activities (Taxonomy-aligned) (A.1)		**10,917**	**100.0%**	**100%**	**0%**	**0%**	**0%**	**0%**	**0%**	**Y**	**Y**	**Y**	**Y**	**Y**	**Y**	**99.8%**		
Of which enabling		10,917	100.0%	100%	0%	0%	0%	0%	0%							99.8%	E	
Of which transitional		-														0.0%		T
A.2. Taxonomy-eligible but not environmentally sustainable activities (not Taxonomy-aligned activities)																		
Transmission of electricity in the Netherlands last mile to fossil power plant		-	0.0%	Y	N/EL	N/EL	N/EL	N/EL	N/EL							0.0%		
Transmission of electricity in Germany last mile to fossil power plant		-	0.0%	Y	N/EL	N/EL	N/EL	N/EL	N/EL							0.0%		
CapEx of Taxonomy- eligible but not environmentally sustainable activities (not Taxonomy-aligned activities) (A.2)		**-**	**0.0%**	**0.0%**	**0%**	**0%**	**0%**	**0%**	**0%**							**0.0%**		
A. CapEx of Taxonomy-eligible activities (A.1+A.2)		**10,917**	**100%**	**100%**	**0%**	**0%**	**0%**	**0%**	**0%**							**99.8%**		
B. TAXONOMY NON-ELIGIBLE ACTIVITIES																		
CapEx of Taxonomy- non-eligible activities		2	0.0%															
Total (A+B)		**10,919**	**100%**															

Y: Yes, Taxonomy-eligible and Taxonomy-aligned activity with the relevant environmental objective.

N: No, Taxonomy-eligible but not Taxonomy-aligned activity with the relevant environmental objective.

N/EL: not eligible, Taxonomy-non-eligible activity for the relevant environmental objective.

Taxonomy-aligned OpEx

Economic activity (1)	Code (2)	OpEx (in EUR million) (3)	Proportion of OpEx year 2024 (%) (4)	Substantial contribution criteria: Climate change mitigation (5)	Climate change adaptation (6)	Water (7)	Pollution (8)	Circular economy (9)	Bio-diversity (10)	DNSH criteria ('Does Not Significantly Harm'): Climate change mitigation (11)	Climate change adaptation (12)	Water (13)	Pollution (14)	Bio-diversity (16)	Minimum safeguards (17)	Proportion of OpEx year 2023 (%) (18)	Category enabling activity (E) (19)	Category transitional activity (T) (20)
A.TAXONOMY-ELIGIBLE ACTIVITIES																		
A.1 Environmentally sustainable activities (Taxonomy-aligned)																		
Transmission of electricity in the Netherlands	CCM 35.12	1,118	25.2%	Y	N/EL	N/EL	N/EL	N/EL	N/EL	Y	Y	Y	Y	Y	Y	26.9%	E	
Transmission of electricity in Germany	CCM 35.12	3,313	74.7%	Y	N/EL	N/EL	N/EL	N/EL	N/EL	Y	Y	Y	Y	Y	Y	67.9%	E	
OpEx of environmentally sustainable activities (Taxonomy-aligned) (A.1)		**4,431**	**99.9%**	**100%**	**0%**	**0%**	**0%**	**0%**	**0%**	**Y**	**Y**	**Y**	**Y**	**Y**	**Y**	**99.4%**		
Of which enabling		4,431	99.9%	100%	0%	0%	0%	0%	0%							99.4%	E	
Of which transitional		-														0.0%		T
A.2. Taxonomy-eligible but not environmentally sustainable activities (not Taxonomy-aligned activities)																		
Transmission of electricity in the Netherlands last mile to fossil power plant		1	0.2%	Y	N/EL	N/EL	N/EL	N/EL	N/EL							0.2%		
Transmission of electricity in Germany last mile to fossil power plant		3	0.1%	Y	N/EL	N/EL	N/EL	N/EL	N/EL							0.4%		
OpEx of Taxonomy- eligible but not environmentally sustainable activities (not Taxonomy-aligned activities) (A.2)		**4**	**0.1%**	**0.1%**	**0%**	**0%**	**0%**	**0%**	**0%**							**0.6%**		
A. OpEx of Taxonomy-eligible activities (A.1+A.2)		**4,435**	**100%**	**100%**	**0%**	**0%**	**0%**	**0%**	**0%**							**100%**		
B. TAXONOMY NON-ELIGIBLE ACTIVITIES																		
OpEx of Taxonomy- non-eligible activities		1	0.0%															
Total (A+B)		**4,436**	**100%**															

Y: Yes, Taxonomy-eligible and Taxonomy-aligned activity with the relevant environmental objective.

N: No, Taxonomy-eligible but not Taxonomy-aligned activity with the relevant environmental objective.

N/EL: not eligible, Taxonomy-non-eligible activity for the relevant environmental objective.

Template 1a Nuclear related activities

Activity	Yes/No
The undertaking carries out, funds or has exposures to research, development, demonstration and deployment of innovative electricity generation facilities that produce energy from nuclear processes with minimal waste from the fuel cycle.	No
The undertaking carries out, funds or has exposures to construction and safe operation of new nuclear installations to produce electricity or process heat, including for the purposes of district heating or industrial processes such as hydrogen production, as well as their safety upgrades, using best available technologies.	No
The undertaking carries out, funds or has exposures to safe operation of existing nuclear installations that produce electricity or process heat, including for the purposes of district heating or industrial processes such as hydrogen production from nuclear energy, as well as their safety upgrades.	No

Template 1b Fossil gas related activities

Activity	Yes/No
The undertaking carries out, funds or has exposures to construction or operation of electricity generation facilities that produce electricity using fossil gaseous fuels.	No
The undertaking carries out, funds or has exposures to construction, refurbishment, and operation of combined heat/cool and power generation facilities using fossil gaseous fuels.	No
The undertaking carries out, funds or has exposures to construction, refurbishment and operation of heat generation facilities that produce heat/cool using fossil gaseous fuels.	No

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Accounting policies are indicated with ⓘ, while key assumptions and estimates are identified by using ✪ in front of the header

Consolidated statement of financial position

(EUR million)	Notes	**2024**	2023[1]
Assets			
Non-current assets			
Tangible fixed assets	3	42,798	33,644
Right of use assets	4	1,257	977
Intangible assets	5	434	373
Investments in joint ventures	6	569	595
Investments in associates	6	33	33
Deferred tax assets	27	521	852
Other financial assets	7	56	42
Total non-current assets		**45,668**	**36,516**
Current assets			
Inventories	8	145	153
Account- and other receivables	9	2,630	3,941
Income tax receivables	27	30	38
Cash and cash equivalents	10	4,393	1,056
Total current assets		**7,198**	**5,188**
Assets of disposal group classified as held for sale	1	26	19
Total assets		**52,892**	**41,723**

(EUR million)	Notes	**2024**	2023[1]
Equity and liabilities			
Equity			
Equity attributable to ordinary shares	12	8,727	5,516
Hybrid securities	12	2,140	2,125
Equity attributable to owners of the company		**10,867**	**7,641**
Non-controlling interests	13	354	400
Total equity		**11,221**	**8,041**
Non-current liabilities			
Borrowings	14	31,366	18,871
Contract liabilities	15	759	612
Deferred tax liabilities	27	3	3
Provisions	16	1,726	1,726
Lease liabilities	4	1,029	784
Net employee defined benefit liabilities	17	240	217
Other financial liabilities	18	170	169
Other liabilities		36	37
Total non-current liabilities		**35,329**	**22,419**
Current liabilities			
Borrowings	14	568	3,640
Contract liabilities	15	14	15
Income tax payables	27	177	153
Provisions	16	564	111
Lease liabilities	4	210	184
Other financial liabilities	18	364	1,975
Account- and other payables	19	4,428	5,172
Total current liabilities		**6,325**	**11,250**
Liabilities of disposal group classified as held for sale	1	17	13
Total equity and liabilities		**52,892**	**41,723**

1 TenneT classified TenneT Germany as held for sale per 31 December 2023. This classification has been ceased as at 30 June 2024, and as such the comparative figures are voluntarily restated to achieve comparability with the current period (refer to note 1 for further information).

Consolidated statement of income and other comprehensive income

For the year ended 31 December

(EUR million)	Notes	**2024**	2023[1]
Revenue	24	**9,999**	**9,298**
Grid expenses	25	-4,564	-5,967
Personnel expenses	25	-353	-335
Depreciation, amortisation and impairment of assets	3, 4, 5	-1,466	-1,350
Other operating expenses	25	-449	-377
Other (gains)/losses		-12	5
Total operating expenses		**-6,844**	**-8,024**
Share in profit of joint ventures and associates	6	49	150
Operating result		**3,204**	**1,424**
Finance income	26	63	42
Finance expenses	26	-739	-495
Finance result		**-676**	**-453**
Result before income tax		**2,528**	**971**
Income tax expense	27	-701	-260
Result for the year		**1,827**	**711**
Result attributable to:			
Owners of the company			
Equity holders of ordinary shares	12	1,744	595
Hybrid securities	12	78	57
Owners of the company		**1,822**	**652**
Non-controlling interests	13	5	59
Result for the year		**1,827**	**711**

1 TenneT classified TenneT Germany as held for sale per 31 December 2023. This classification has been ceased as at 30 June 2024, and as such the comparative figures are voluntarily restated to achieve comparability with the current period (refer to note 1 for further information).

(EUR million)	Notes	**2024**	2023
Result for the year		**1,827**	**711**
Other comprehensive income			
Items not to be reclassified to profit or loss in subsequent years:			
Remeasurement of defined benefit pensions	12, 17	8	-29
Taxation on remeasurement of defined benefit pensions	12, 27	-2	9
Net other comprehensive income/(loss) that will not be reclassified to profit or loss in subsequent periods		**6**	**-20**
Total comprehensive income for the year, net of tax		**1,833**	**691**
Attributable to:			
Owners of the company			
Equity holders of the parent		1,750	575
Hybrid securities		78	57
Owners of the company		**1,828**	**632**
Non-controlling interests		5	59
Total comprehensive income for the year, net of tax		**1,833**	**691**

Earning per share attributable to the equity holders of ordinary shares

For the year ended 31 December

EUR per share	Note	**2024**	2023
Basic and diluted earnings per share	28	8,720	2,975

Consolidated statement of changes in equity

For the year ended 31 December

(EUR million)	Notes	Attributable to equity holders of the company							Non-controlling interest	**Total equity**
		Paid-up and called-up capital	Share premium reserve	Retained earnings	Unappropriated result	**Equity attributable to ordinary shares**	Hybrid securities	**Equity attributable to owners of the company**		
At 1 January 2023		**100**	**3,020**	**2,980**	**-967**	**5,133**	**2,125**	**7,258**	**455**	**7,713**
Result for the year		-	-	-	595	595	57	652	59	711
Total other comprehensive income		-	-	-20	-	-20	-	-20	-	-20
Total comprehensive income		**-**	**-**	**-20**	**595**	**575**	**57**	**632**	**59**	**691**
Capital repayments	13	-	-	-	-	-	-	-	-97	-97
Dividends paid	12, 13	-	-	-	-207	-207	-	-207	-17	-224
Distribution on hybrid securities	12	-	-	-	-	-	-57	-57	-	-57
Tax on distribution on hybrid securities	12	-	-	15	-	15	-	15	-	15
Appropriation remaining prior year result		-	-	-1,174	1,174	-	-	-	-	-
At 31 December 2023		**100**	**3,020**	**1,801**	**595**	**5,516**	**2,125**	**7,641**	**400**	**8,041**
Result for the year		-	-	-	1,744	1,744	78	1,822	5	1,827
Total other comprehensive income		-	-	6	-	6	-	6	-	6
Total comprehensive income		**-**	**-**	**6**	**1,744**	**1,750**	**78**	**1,828**	**5**	**1,833**
Capital contribution	12	-	1,602	-	-	1,602	-	1,602	25	1,627
Capital repayments	13	-	-	-	-	-	-1,100	-1,100	-50	-1,150
Dividends paid	12, 13	-	-	-	-150	-150	-	-150	-26	-176
Issue of hybrid securities	12	-	-	-7	-	-7	1,100	1,093	-	1,093
Distribution on hybrid securities	12	-	-	-	-	-	-63	-63	-	-63
Tax on distribution on hybrid securities	12	-	-	16	-	16	-	16	-	16
Appropriation remaining prior year result		-	-	445	-445	-	-	-	-	-
At 31 December 2024		**100**	**4,622**	**2,261**	**1,744**	**8,727**	**2,140**	**10,867**	**354**	**11,221**

Consolidated statement of cash flows

For the year ended 31 December

(EUR million)	Notes	**2024**	2023
Operating activities			
Operating result		**3,204**	**1,424**
Non-cash adjustments to reconcile result to net cash flows:			
Depreciation, amortisation and impairment of assets	3, 4, 5	1,466	1,350
Result on disposal of assets		26	1
Share in result of joint ventures and associates	6	-49	-150
Dividends received from joint ventures and associates	6	39	155
Movements in provisions and other (financial) assets and liabilities		440	12
Total non-cash adjustments		**1,922**	**1,368**
Working capital adjustments excluding EEG working capital:			
(Increase)/decrease in account- and other receivables	9	33	-342
(Increase)/decrease in inventories		-2	-21
Increase/(decrease) in contract liabilities	15	147	81
Increase/(decrease) in current other financial liabilities	18	-9	-177
Increase/(decrease) in account- and other payables	19	222	596
Cash generated from operating activities		**391**	**137**
Income taxes paid, (net)		-321	-140
Net cash flows from operating activities excluding EEG working capital		**5,196**	**2,789**
EEG working capital adjustments:			
(Increase)/decrease in EEG receivables	9	1,270	-1,250
(Increase)/decrease EEG deposits > 3 months	9	-	-
Increase/(decrease) in EEG payables	9	-1,275	-3,193
Total EEG working capital adjustments		**-5**	**-4,443**
Net cash flows from operating activities		**5,191**	**-1,654**
Investing activities			
Purchases of tangible and intangible fixed assets	3, 5, 19	-10,261	-7,319
Proceeds from sale of tangible and intangible fixed assets		4	4
Proceeds from sale of subsidiaries	6	-	33
Interest received	26	53	35
Capital repayments from joint ventures	6	35	34
Capital contributions to joint ventures and associates	6	-	-
Net cash flows used in investing activities		**-10,169**	**-7,213**

(EUR million)	Notes	**2024**	2023
Financing activities			
Net borrowings			
Proceeds from borrowings	14	13,350	3,787
Repayments of borrowings	14	-3,941	-1,004
Total net borrowings		**9,409**	**2,783**
Other financing activities			
Payments of lease liabilities	4	-246	-177
Interest paid		-568	-417
Contributions by ordinary shareholder of the company	12, 18	-	1,602
Dividends paid to ordinary shareholders of the company	12	-150	-207
Proceeds from issue of hybrid securities	12	1,093	-
Repayment of hybrid securities	12	-1,100	-
Distribution on hybrid securities	12	-63	-57
Repayments of other financial liabilities	18	-9	-37
Dividends paid and capital repayments to non-controlling interests	13	-76	-114
Proceeds from capital contributions to non-controlling interests	13	25	-
Total other financing activities		**-1,094**	**593**
Net cash flows from financing activities		**8,315**	**3,376**
Net change in cash and cash equivalents		**3,337**	**-5,491**
Cash and cash equivalents at 31 December	10	4,393	1,056
Cash and cash equivalents at 1 January	10	1,056	6,547
Net change in cash and cash equivalents		**3,337**	**-5,491**

Notes to the consolidated financial statements

TenneT is continuously improving its financial reporting to make it more relevant and understandable to its stakeholders. These financial statements focus on the material (financial) topics for 2024. Accounting policies are indicated with ⓘ, while key assumptions and estimates are identified by using ✪ in front of the header.

1. Basis for reporting

The accounting policies describes TenneT's approach to recognise and measure transactions and balance sheet items in the financial statements. Accounting policies, including new European Union (EU) endorsed accounting standards, amendments and interpretations, relating to the consolidated financial statements as a whole are described hereafter. This section also provides general guidance regarding assumptions, estimates and judgements used in the preparation of the financial statements. A more detailed description of accounting policies and material estimates related to specific reported amounts is presented in the respective notes. Only accounting policies that are deemed material are presented in these financial statements. TenneT considers an item material if, in TenneT's view, it is likely to have an impact on the economic decisions of primary users of these financial statements.

General

TenneT Holding B.V. and its subsidiaries (hereafter referred to as 'TenneT', 'the Company' or 'the Group') are a leading electricity transmission system operator ('TSO') with activities in the Netherlands and large parts of Germany. In the Netherlands, TenneT's activities are conducted by TenneT TSO B.V. and its subsidiaries. In Germany, TenneT's work is performed by TenneT GmbH & Co. KG and its subsidiaries.

As a TSO, the principal tasks are to (1) ensure a secure and continuous supply of electricity, (2) provide transmission services by transporting electricity along the high-voltage grid from where it is produced to where it is consumed, (3) provide system services to balance supply and demand of electricity and (4) facilitate a liquid and stable electricity market to support the large-scale energy transition to renewables.

The Dutch state owns the entire issued share capital of TenneT Holding B.V. Furthermore, TenneT Holding B.V. has issued hybrid securities which are subordinated and accounted for as part of equity attributable to equity holders of the Company.

The registered office of TenneT Holding B.V. is located at Utrechtseweg 310, Arnhem, the Netherlands, with its statutory seat in Arnhem and a registration with the Dutch Commercial Register under number 09083317.

These consolidated financial statements for the year ended 31 December 2024 were prepared by the Executive Board and authorised for issuance in accordance with a resolution of the Supervisory Board on 3 March 2025. The financial statements will be submitted for adoption at the General Meeting of Shareholders. These consolidated financial statements have been audited by Deloitte Accountants B.V.

Basis for preparation

These consolidated financial statements are prepared in accordance with International Financial Reporting Standards (IFRS Accounting Standards) as adopted by the European Union and Part 9 of Book 2 of the Dutch Civil Code. The company financial statements for TenneT Holding B.V. are prepared in accordance with the provisions of Part 9 of Book 2 of the Dutch Civil Code.

The consolidated financial statements are prepared on a going concern basis. The going concern basis presumes that the Group has adequate resources to remain in operation and that the Executive Board intends it to do so, for at least one year from the date of the end of the reporting period.

The consolidated financial statements are prepared on a historical cost basis, unless described otherwise in the accounting policy of a balance sheet position. They are presented in euros and all values are rounded to the nearest million (EUR 000,000), except when otherwise indicated.

Earnings per share are disclosed on voluntary basis, please refer to note 28.

Basis for consolidation

The consolidated financial statements incorporate the financial statements of TenneT Holding B.V. and its subsidiaries at 31 December 2024. A list of the legal entities included in the consolidation is included in note 30. Subsidiaries are consolidated from the date of acquisition, constituting the date on which control is obtained and continue to be consolidated until the date when such control ceases. The financial statements of subsidiaries are prepared for the same reporting period as the parent company, using consistent accounting policies. All inter-company balances, transactions, unrealised gains and losses resulting from inter-company transactions and dividends are eliminated in full in consolidation.

A change in the ownership interest of a subsidiary, without a loss of control, is accounted for as an equity transaction. If TenneT ceases to have control over a subsidiary, TenneT derecognises the subsidiary's assets (including goodwill), liabilities and any non-controlling interest in the former subsidiary at the date control is lost (including the cumulative translation differences). Furthermore, the fair value of the consideration received, the fair value of any investment retained and any surplus or deficit in statement of income are recognised. Acquisitions are accounted for using the acquisition method, where the purchase price is allocated to the identifiable assets acquired and liabilities assumed on a fair value basis and the remainder is recognised as goodwill.

Material accounting judgements, estimates and assumptions

The preparation of financial statements requires to make estimates and assumptions that affect the reported amounts of assets and liabilities, disclosures of contingent assets and liabilities and the reported amounts of revenue and expenses during the reporting period. Such estimates are assessed continuously on the basis of previous results and experience, consultations with experts, trends, prognoses and other methods which TenneT deems appropriate in each individual case. Actual results could differ from these estimates. Accounting topics containing material estimates and assumptions are as follows:

Item	Notes	Estimate/assumptions
Assets and liabilities held for sale	1	Estimate of probable date of sale and estimate of sale price
Tangible fixed assets	3	Estimate of identification of cash-generating units (CGU) for impairment testing, the remaining useful life and of the recoverable amount
		In both the assessment of the useful lives of TenneT's assets and in the design phase of new assets, climate related risks are considered. Climate related risks are reduced by adjusting design or taking mitigating measures.
Right of use assets and lease liabilities	4	Estimates of discount rate and expected extension or accelerated termination date
Intangible assets	5	Estimate of identification of CGUs for impairment testing, the remaining useful life and of the recoverable amount
Impairment test of goodwill	5	Estimate of cash flow projections and pre-tax discount rate
Decommissioning provision	16	Estimate of decommissioning costs, decommissioning dates, discount rates and inflation rates in the period until removal
Net employee benefit obligations	17	Financial, actuarial and demographic assumptions
Other provisions	16	Mainly estimate of probability and realisation date
Grid expense payables	19	Mainly estimate of electricity volumes and prices

A more detailed disclosure of these accounting judgements, estimates and assumptions is included in the disclosure notes as referenced before.

Changes in accounting estimates

The Group has reassessed its assumptions for the decommissioning provision and the corresponding asset retirement cost as included in the tangible fixed assets per 31 December 2024. Based on that assessment, the Group concluded that, based on new information, several assumptions and estimates in the determination of the total estimated decommissioning costs needed to be updated. The updated assumptions resulted in a decrease in the decommissioning provision and the corresponding asset retirement cost per 31 December 2024 amounting to EUR 159 million. Please, refer to note 16 for further details on the decommissioning provision.

Annually, the Group reassesses its estimate for the useful lives of tangible fixed assets. Based on that review, the Group concluded that the useful lives of several onshore assets needed to be extended prospectively as per 1 January 2024. The corresponding decreased depreciation, based on the asset base as of 31 December 2023, is approximately EUR 45 million on an annual basis, impacting both the Dutch operating segment (EUR 22 million) as well as the German operating segment (EUR 23 million). Please, refer to note 3 for further details on the useful lives of tangible fixed assets.

Grid related accruals recognised in prior periods and its underlying estimation assumptions, are reassessed on a regular basis. During 2024, this reassessment resulted in updated figures caused by better available information, and as a result the accruals could be estimated more reliable. The impact of the prospectively recognised adjustment amounts to EUR 535 million, resulting in decreased revenue and account- and other receivables.

Changes in EU-endorsed published IFRS Accounting Standards and interpretations effective in 2024

Material new and amended IFRS Accounting Standards adopted by the Group

- Amendments to IAS 1 Presentation of Financial Statements
- Amendments to IFRS 16 Leases
- Amendments to IAS 7 Statement of Cash Flows and IFRS 7 Financial Instruments: Disclosure

The issued changes to IFRS Accounting Standards do not have a material impact.

IFRS Accounting Standards issued but not yet effective and adopted by the Group

- Amendments to IAS 21 The effect of changes in foreign exchange rates
- Amendments to IFRS 9 Financial Instruments and IFRS 7 Financial Instruments: Disclosure
- IFRS 18 Presentation and Disclosure in Financial Instruments
- IFRS 19 Subsidiaries without Public Accountability: Disclosures

TenneT has not early adopted any accounting standard, interpretation or amendment that has been issued but is not yet effective. It is anticipated that any issued changes to IFRS Accounting Standards that are not yet effective and adopted by TenneT will not have a material impact.

Functional currency

These consolidated financial statements are presented in euros, which is also the parent company's and all subsidiaries` functional currency.

Assets held for sale

TenneT Germany

In February 2023, TenneT started to explore the potential sale of German activities to the German state. Over the past year, discussions took place between TenneT and KfW, acting on behalf of the German state, with close involvement of the German state and the Dutch state as TenneT's sole shareholder. As announced on 20 June 2024, the negotiations with KfW have been terminated.

Due to these circumstances, TenneT considers that it is as per 30 June 2024 no longer highly probable that all its shares in TenneT Germany will be sold to KfW. In the consolidated financial statements, the IFRS 5 ‘Non current assets held for sale and discontinued operations' Accounting Standard is not applied, which implies that the German activities are presented as continued operations. No longer classifying the German activities as held for sale has an impact on the 31 December 2024 figures. As a result, comparative figures are, in contrast to the Company’s half-year report, voluntarily adjusted because of the significance of the affected balances and the related impact in understanding the changes in the balance sheet from 31 December 2023 to 31 December 2024. The assets and liabilities of TenneT Germany per 31 December 2023, as disclosed in the next table, are incorporated to achieve the intended comparability with the current period.

In addition, the depreciation that would have been recognised had the German activities not been classified as held for sale, amounting to EUR 516 million for the first half year of 2024, are recognised as per 30 June 2024. There is no effect on the result of last year.

The major classes of assets and liabilities of TenneT Germany classified as held for sale at 31 December were as follows:

(EUR million)	Notes	2023
Assets		
Tangible fixed assets	3	21,880
Right of use assets	4	872
Intangible assets	5	119
Investments in joint ventures	6	384
Investments in associates	6	1
Deferred tax assets	27	272
Other financial assets	7	18
Inventories	8	138
Account- and other receivables	9	3,489
Income tax receivable	27	38
Cash and cash equivalents	10	383
Assets held for sale		**27,594**
Liabilities		
Contract liabilities	15	85
Deferred tax liabilities	27	2
Provisions	16	1,293
Lease liabilities	4	862
Net employee defined benefit liabilities	17	217
Other financial liabilities	18	169
Income tax payable	27	81
Account- and other payables	19	4,532
Other liabilities		27
Liabilities held for sale		**7,268**
Net assets directly associated with disposal group		**20,326**

NOVEC B.V.

NOVEC B.V. is a 100% subsidiary of TenneT Holding B.V. The activities of NOVEC are part of the segment non-regulated activities. Following a strategic review, considering TenneT's focus on the energy transition, it was concluded that TenneT Holding B.V. no longer needs to remain 100% shareholder of NOVEC.

On 5 June 2024, KPN and ABP announced that they signed an agreement to create a new tower company. The company will hold the passive mobile infrastructure assets of KPN, as well as those of NOVEC and OTC, with TenneT selling its stake in NOVEC as part of this transaction by means of a legal demerger. The transaction is, after approval by the works council of KPN and the Dutch competition authorities ('ACM'), completed in February 2025.

Additionally, on 1 November 2024, NOVEC announced that a share purchase agreement has been signed where it will sell its stake in WL Winet to BAM. The transaction is not subject to approval by the ACM, and has been completed in February 2025.

Total assets held for sale relating to NOVEC B.V. amounts to EUR 26 million (31 December 2023: EUR 19 million) and the liabilities held for sale amounts to EUR 17 million (31 December 2023: EUR 13 million).

The major classes of assets and liabilities of NOVEC classified as held for sale at 31 December were as follows:

(EUR million)	Notes	**2024**	2023
Assets			
Tangible fixed assets	3	11	7
Right of use assets	4	10	7
Intangible assets	5	3	3
Investments in associates	6	1	1
Account- and other receivables	9	1	1
Assets held for sale		**26**	**19**
Liabilities			
Provisions	16	5	1
Lease liabilities	4	7	6
Account- and other payables	19	5	6
Liabilities held for sale		**17**	**13**
Net assets directly associated with disposal group		**9**	**6**

2. Segment information

This section sets out the financial performance for the year in accordance with the way in which TenneT manages its business (operating segments). TenneT measures and assesses its performance based on underlying financial information, which is explained further hereafter.

TenneT generates substantially all of its revenue from its regulated operating segments in the Netherlands and Germany. Therefore, close collaboration with its respective regulators to obtain regulations and agreements that provide reasonable compensation for the risks TenneT faces, is key. TenneT's involvement in certain limited non-regulated activities is closely related and ancillary to its core tasks.

Segment analysis

TenneT's operating segments consist of:

- TSO Netherlands;
- TSO Germany; and
- Non-regulated activities (partly part of held for sale).

For management information purposes, the performance of TenneT's regulated activities in the Netherlands and in Germany is considered separately into two geographical segments. This segmentation, based on separately applicable regulatory frameworks, is the key determinant for financial management of the business and for decision-making on budgets, allocation of resources and financing.

Financing activities (including finance income and expenses) are managed on a Group basis and amounts related thereto are not allocated to the segments. Transfer prices between the Netherlands and Germany are set at arm's length in a manner similar to transactions with third parties. These intercompany transactions are eliminated in the consolidated financial statements.

The Executive Board is the chief operating decision-making body of the Company (as defined by IFRS 8 'Operating segments'). Periodically, it monitors the performance of the respective operating segments for the purpose of performance management and decision making about resource allocation. The segment performance is based on underlying financial information, where earnings before interest and taxes ('EBIT'), investments, funds from operations ('FFO') to Net debt and return on invested capital ('ROIC') are key metrics. The definition of EBIT equals operating result as used in the consolidated statement of income. Performance of non-regulated activities is evaluated based on EBIT and ROIC of these activities.

Underlying financial information is based on the principle of recognising regulatory assets and liabilities for all of TenneT's regulated activities. This implies that amounts resulting from past events and which are allowed to be received or are required to be returned through future tariffs are recorded as an asset or liability, respectively. The Executive Board holds the opinion that the presentation of underlying financial information provides additional relevant insight in the actual business, financial performance, and as such economic reality.

Hereafter an overview of the Company's key metrics is disclosed:

(EUR million)	**2024**				2023			
Underlying information	**Assets**	**Liabilities**	**Operating result**	**Investments**	Assets	Liabilities	Operating result	Investments
TSO Netherlands	18,487	11,624	625	3,783	15,586	9,020	548	2,948
TSO Germany	33,221	27,759	1,087	6,852	28,830	23,786	1,141	4,779
Non-regulated companies	3,843	357	27	2	629	1,837	105	3
Total continued segments	**55,551**	**39,740**	**1,739**	**10,637**	**45,045**	**34,643**	**1,794**	**7,730**
NOVEC B.V. (held for sale)	46	20	8	-	110	16	23	-
Total segments	**55,597**	**39,760**	**1,747**	**10,637**	**45,155**	**34,659**	**1,817**	**7,730**
Eliminations and adjustments	-326	3,108	-2	-	-409	-99	-	-
Consolidated underlying information	**55,271**	**42,868**	**1,745**	**10,637**	**44,746**	**34,560**	**1,817**	**7,730**

The ROIC and FFO to Net debt are measured at group level, and amount to respectively 4.7% (2023: 5.8%) and 8.2% (2023: 11.6%). Please, refer to note 11 for further information about the FFO to Net debt, and to Safeguard sustainable financial performance for further information about the ROIC as well as the FFO to Ned debt.

Reconciliation of underlying figures with IFRS figures

In the IFRS figures, revenue from contracts with customers is recognised when control of the goods or services is transferred to the customer at an amount that reflects the consideration to which TenneT expects to be entitled in exchange for those goods or services. In the underlying financial information revenue is recognised according to the allowed revenue as determined by the regulator. Consequently, differences between IFRS revenue and the underlying allowed revenue are recognised in underlying financial information as regulatory assets or liabilities. By doing so, post calculation differences are directly matched to the related costs and therefore provide additional relevant insight for managing TenneT's business.

Following this methodology, the main differences between IFRS figures and underlying financial information, as presented in this disclosure note as well as in the Executive Board Report, are related to the recognition of:

- regulatory assets and liabilities to be settled in future tariffs related to differences between actual and allowed revenue or (pass-through) expenses from connection and transmission services and offshore activities;
- revenue from operation of energy exchanges (auction receipts);
- revenue from maintenance of the energy balance;
- valuation differences in tangible fixed assets and related depreciation expenses;
- finance income and expenses related to interest on the regulatory assets and liabilities; and
- the income tax effect of the aforementioned adjustments.

These main differences are disclosed in the tables hereafter, followed by a further disclosure. Please, note the investment amounts recognised under IFRS equal underlying investments. Investments consists of additions to tangible fixed assets, relate to note 3, and additions to intangible assets, relate to note 5.

Underlying net assets and liabilities can be reconciled to reported IFRS figures as follows:

(EUR million)	**2024**	2023
Consolidated underlying information		
Assets	55,271	44,746
Liabilities	-42,868	-34,560
Total net assets and liabilities	**12,403**	**10,186**
To be settled in tariffs	-2,589	-3,565
Auction receipts	664	592
Valuation differences tangible fixed assets	-180	-198
Other regulatory receivables and payables	454	193
Tax impact	469	833
Total underlying items	**-1,182**	**-2,145**
Consolidated IFRS information	**11,221**	**8,041**
Consolidated IFRS information		
Assets	52,892	41,723
Liabilities	-41,671	-33,682
Total net assets and liabilities	**11,221**	**8,041**

Underlying financial information can be reconciled to reported IFRS figures as follows:

	2024					
(EUR million)	TSO NL	TSO Germany	Non-regulated	**Total segments**	Eliminations	**Total**
Connection and transmission services	1,774	4,077	-	5,851	-	5,851
Maintaining the energy balance	134	321	-	455	-	455
Operation of energy exchanges	1	-	-	1	-	1
Offshore (balancing)	565	1,354	-	1,919	-	1,919
Other	32	128	44	204	-	204
Inter-segment	50	22	5	77	-77	-
Total underlying revenue	**2,556**	**5,902**	**49**	**8,507**	**-77**	**8,430**
Grid expenses	-1,125	-3,324	-	-4,449	13	-4,436
Other operating expenses	-807	-1,505	-48	-2,360	62	-2,298
Share in result of joint ventures and associates	1	14	34	49	-	49
Underlying operating result	**625**	**1,087**	**35**	**1,747**	**-2**	**1,745**
Revenue adjustments to IFRS	993	576	-	1,569	-	1,569
Cost adjustments to IFRS	5	-115	-	-110	-	-110
IFRS operating result	**1,623**	**1,548**	**35**	**3,206**	**-2**	**3,204**
Finance result						-676
Result before income tax						**2,528**
Income tax expenses						-701
Result for the period						**1,827**

	2023					
(EUR million)	TSO NL	TSO Germany	Non-regulated	**Total segments**	Eliminations	**Total**
Connection and transmission services	2,094	4,516	-	6,610	-	6,610
Maintaining the energy balance	139	384	-	523	-	523
Operation of energy exchanges	1	-	-	1	-	1
Offshore (balancing)	465	1,452	-	1,917	-	1,917
Other	34	89	48	171	-	171
Inter-segment	53	24	5	82	-82	-
Total underlying revenue	**2,786**	**6,465**	**53**	**9,304**	**-82**	**9,222**
Grid expenses	-1,487	-4,003	-1	-5,491	14	-5,477
Other operating expenses	-753	-1,339	-54	-2,146	68	-2,078
Share in result of joint ventures and associates	2	18	130	150	-	150
Underlying operating result	**548**	**1,141**	**128**	**1,817**	**-**	**1,817**
Revenue adjustments to IFRS	-484	560	-	76	-	76
Cost adjustments to IFRS	7	-476	-	-469	-	-469
IFRS operating result	**71**	**1,225**	**128**	**1,424**	**-**	**1,424**
Finance result						-453
Result before income tax						**971**
Income tax expenses						-260
Result for the period						**711**

	Reconciliation IFRS to underlying figures					
	2024			2023		
(EUR million)	IFRS figures	Underlying items	**Underlying figures**	IFRS figures	Underlying items	**Underlying figures**
Connection and transmission services	6,903	-1,052	5,851	5,868	742	6,610
Maintenance of the energy balance	698	-243	455	693	-170	523
Operation of energy exchanges	588	-587	1	750	-749	1
Offshore (balancing)	1,609	310	1,919	1,818	99	1,917
Other	201	3	204	169	2	171
Total revenue	**9,999**	**-1,569**	**8,430**	**9,298**	**-76**	**9,222**
Grid expenses	-4,564	129	-4,435	-5,967	490	-5,477
Personnel expenses	-353	-	-353	-335	-1	-336
Depreciation and amortisation of assets	-1,466	-19	-1,485	-1,350	-19	-1,369
Other operating expenses	-449	-	-449	-377	-1	-378
Other (gains)/losses	-12	-	-12	5	-	5
Total operating expenses	**-6,844**	**110**	**-6,734**	**-8,024**	**469**	**-7,555**
Share in profit of joint ventures and associates	49	-	49	150	-	150
Operating result	**3,204**	**-1,459**	**1,745**	**1,424**	**393**	**1,817**
Finance income	63	158	221	42	102	144
Finance expenses	-739	-22	-761	-495	-15	-510
Finance result	**-676**	**136**	**-540**	**-453**	**87**	**-366**
Result before income tax	**2,528**	**-1,323**	**1,205**	**971**	**480**	**1,451**
Income tax expenses	-701	363	-338	-260	-120	-380
Result for the year	**1,827**	**-960**	**867**	**711**	**360**	**1,071**
Result attributable to:						
Owners of the company						
Equity holders of ordinary shares	1,744	-960	784	595	360	955
Hybrid securities	78	-	78	57	-	57
Owners of the company	**1,822**	**-960**	**862**	**652**	**360**	**1,012**
Non-controlling interests	5	-	5	59	-	59
Result for the year	**1,827**	**-960**	**867**	**711**	**360**	**1,071**
Basic and diluted earnings per share	**8,720**		**3,920**	**2,975**		**4,775**

In the following table the underlying adjustments in revenue are matched with the variance in the related underlying balance sheet accounts:

	Reconciliation IFRS to underlying figures					
	2024			2023		
(EUR million)	IFRS figures	Underlying items	**Underlying figures**	IFRS figures	Underlying items	**Underlying figures**
Underlying items						
To be settled in tariffs		-744			829	
Auction receipts		-586			-748	
Investment contributions		4			4	
Maintenance of the energy balance		-243			-161	
Total underlying adjustments in revenue		**-1,569**			**-76**	

The decrease in the underlying revenue can mainly be explained by lower costs for ancillary services resulting in lower underlying revenue, as it includes a reimbursement for ancillary services, in combination with lower regulatory rates in Germany, partly offset by increased revenue due to ongoing and increasing investments, resulting in a growing regulatory asset base and higher onshore and offshore revenue which are based upon these asset base values.

In 2024, TenneT had three (2023: one) individual customers which invoiced more than 10% of its total group underlying revenue. For the segment TSO Germany the revenue from these customers amounted to EUR 3,688 million (2023: EUR 1,335 million).

For further analysis of underlying results please refer to the 'Safeguard sustainable financial performance' section of the Integrated Annual Report.

The material differences between underlying financial information and IFRS are further disclosed hereafter.

To be settled in tariffs

Revenue surpluses and deficits resulting from variances related to actual costs or transmission volumes (ex post) and estimates used to set tariffs (ex ante) are incorporated in the tariffs of subsequent years in both Germany and the Netherlands. In underlying financial information, these surpluses and deficits are recorded as assets and liabilities, respectively, under 'to be settled in tariffs'.

The underlying item 'to be settled in tariffs' is related to the revenue stream 'connection and transmission services' and 'offshore' and concerns an underlying adjustment of EUR 744 million (2023: EUR 829 million).

Auction receipts and investment contributions

Auction receipts result from auctioning the available electricity transmission capacity on cross-border interconnections. These receipts are not at TenneT's free disposal. In accordance with Regulation (EU) 2019/943, auction receipts shall be used to fulfil the following priority objectives:

1. guaranteeing the actual availability of the allocated capacity including firmness compensation; or
2. maintaining or increasing cross-zonal capacities through optimisation of the usage of existing inter-connectors by means of coordinated remedial actions, where applicable, or covering costs resulting from network investments that are relevant to reduce inter-connector congestion.

In Germany, auction receipts are recognised as interest-free capital on investments and are released over 20 years. The reversal amounts are applied in the revenue cap of TenneT TSO GmbH with t-2 offset. Thus, the reversal amount offsets the depreciation of the investments. When these priority objectives have been adequately fulfilled, auction receipts may be used as income to be taken into account by the regulatory authorities when approving the methodology for calculating network tariffs or fixing network tariffs, or both. In the Netherlands, the current outstanding balance of auction receipts will be used in accordance with the aforementioned objectives. Investments in previous years financed by using auction receipts are classified as investment contributions and are reported under ‘liabilities’. A periodic amount equal to the depreciation charges, plus a portion of the operating expenses, is released to the statement of income, following the release scheme as described above

The underlying item 'auction receipts' is related to the revenue stream 'operations of energy exchanges' and concerns an underlying adjustment of EUR 586 million (2023: EUR 748 million). Furthermore, the underlying item 'auction receipts' is also related to the grid expenses, amounting to an underlying adjustment of EUR 124 million (2023: EUR 490 million). The underlying item 'investment contribution' is related to the revenue stream 'other' and concerns an underlying adjustment of to EUR 4 million (2023: EUR 4 million).

Maintaining the energy balance

As transmission system operator of the high-voltage grid in the Netherlands, TenneT receives funds for performing certain statutory duties, such as the maintenance of the energy balance. The proceeds from these activities (i.e. imbalance settlements) may only be used after approval by the ACM. Imbalance settlements collected during the year are to be offset in transmission tariffs in the subsequent year. Consequently, these amounts are recorded as a liability and released in the subsequent year in the underlying financial information.

Furthermore, as the balancing group coordinator, TenneT TSO GmbH is responsible for balancing the balancing groups in terms of energy. TenneT TSO GmbH balances surplus or shortfall balancing groups by means of control energy and bills the balancing group managers for the resulting costs. For this billing of balance imbalances, the so-called 'Uniform balancing energy price across control zones' (reBAP) is used. As a result, TenneT TSO GmbH receives higher payments from the balancing group managers than TenneT TSO GmbH pays to the power plant operators. The resulting additional revenue from the balancing energy billing system are to be deducted from the grid charges. Analogously, revenue shortages will increase future grid fees.

The underlying item 'maintenance of the energy balance' is related to the revenue stream 'maintenance of the energy balance' an underlying adjustment of to EUR 243 million (2023: EUR 161 million).

Depreciation and amortisation of assets

Differences in depreciation and amortisation of assets occur due to the difference in accounting treatment of the regulatory deferral accounts and the related cash flows in order to determine the economic useful life and recoverable amount of the assets as used for impairment analysis. Between underlying and IFRS there is no difference in depreciation method and depreciation terms, but the amount of depreciation deviates due to

1. an impairment under IFRS of the NorNed cable of EUR 232 million in 2015, which is not recognised in underlying figures. Therefore, each year, a difference exists in the depreciation expense between IFRS and underlying financial information until the end of the useful life of the NorNed cable; and
2. higher acquisition costs resulting from an adjustment in connection with the Purchase Price Allocation ('PPA') relating to the acquisition of TenneT Germany in 2010.

The underlying account 'valuation differences in tangible fixed assets' is related to the expense 'depreciation and amortisation of assets' and concerns an underlying adjustment of EUR -19 million for 2024 (2023: EUR -19 million).

Finance income and expenses

As the recognised asset 'to be settled in tariffs' will be settled in subsequent years, interest is calculated on this outstanding balance that is recognised as finance income in underlying financial information. Consequently, the underlying finance expenses consist of interest on the recognised liabilities related to auction receipts and proceeds from maintenance of the energy balance. For 2024, an underlying adjustment in finance result of EUR 136 million is recognised (2023: EUR 87 million).

Corporate income tax

Resulting from the aforementioned differences between underlying financial information and IFRS figures, the result before income tax also deviates. Therefore, this has implications for the income tax expense as well. For 2024, an underlying adjustment in income tax expense of EUR 363 million is recognised (2023: EUR -120 million).

ⓘ Accounting policies applied for underlying financial information

Underlying financial information matches regulatory revenue and expenses in a corresponding reporting period and defers certain income items until used for investments or tariff reductions.

Matching of revenue and expenses to the years in which these are settled in tariffs is achieved through recognition of regulatory deferral accounts in the underlying figures. The key requirement for such recognition is that an existing regulatory framework is in place that permits the future reimbursement or requires the future settlement of regulatory assets or liabilities, respectively. Consequently, a regulatory asset is recognised in underlying financial information in respect of permitted reimbursements of current year expenses in future year's tariffs. Vice versa, a regulatory liability is recognised in underlying financial information in respect of required settlements (i.e. repayments) of current year revenue through future tariffs.

3. Tangible fixed assets

(EUR million)	High-voltage substations	High-voltage connections	Other assets	Assets under construction	**Total**
Cost					
At 1 January 2023	**12,718**	**11,416**	**1,291**	**9,153**	**34,578**
Additions	242	174	201	6,986	7,603
Transfers	2,144	1,464	45	-3,653	-
Changes in estimations	-23	399	-	14	390
Deconsolidation of subsidiaries	-	-	-13	-	-13
Acquisition of a subsidiary	-	-	3	-	3
Disposals	-23	-40	-8	-2	-73
Transfer to held for sale (note 1)	-	-	-14	-	-14
At 31 December 2023	**15,058**	**13,413**	**1,505**	**12,498**	**42,474**
Additions	107	239	202	9,955	10,503
Transfers	833	995	58	-1,868	18
Changes in estimations	21	-157	-	-11	-147
Disposals	-73	-48	-4	-17	-142
At 31 December 2024	**15,946**	**14,442**	**1,761**	**20,557**	**52,706**
Depreciation and impairment					
At 1 January 2023	**3,971**	**3,276**	**508**	**-**	**7,755**
Depreciation	628	441	67	-	1,136
Deconsolidation	-	-	-2	-	-2
Acquisition of a subsidiary	-	-	4	-	4
Disposals	-16	-38	-2	-	-56
Transfer to held for sale (note 1)	-	-	-7	-	-7
At 31 December 2023	**4,583**	**3,679**	**568**	**-**	**8,830**
Depreciation	661	462	70	-	1,193
Disposals	-65	-47	-3	-	-115
At 31 December 2024	**5,179**	**4,094**	**635**	**-**	**9,908**
Net book value					
At 1 January 2023	8,747	8,140	783	9,153	26,823
At 31 December 2023	10,475	9,734	937	12,498	33,644
At 31 December 2024	10,767	10,348	1,126	20,557	42,798

High-voltage substations include onshore and offshore transformer and converter stations. High-voltage connections consist of overhead lines, sub-sea cables and underground onshore connections. Unlike lands for substations, lands surrounding high-voltage pylons and cables are generally not owned by TenneT. Other tangible fixed assets consist of office buildings, office ICT equipment and other company assets. Assets under construction include investments related to new build onshore and offshore transformers, converter stations, onshore lines, offshore platforms and (sub-sea) cables. Please, refer to the Company's website for more details.

During 2024, the Company adjusted the classification of work in progress to better reflect the way in which economic benefits are derived from its use. As a result, EUR 18 million is reclassified from inventories to assets under construction. Comparative figures have not been adjusted for this reclassification. Also, several replacement investment projects from the same portfolio, as recorded within the assets under construction, amounting to EUR 17 million have been disposed of during 2024, as a better replacement solution was chosen.

For all of the offshore assets (mainly offshore platforms and sub-sea cables) included in the categories of high-voltage substations and high-voltage connections legal and constructive asset retirement obligations exist for decommissioning these assets at the end of the useful lives or at the end date of the related permits. Therefore, a decommissioning provision is recognised, for which the estimated total asset removal costs are capitalised as part of the carrying value of the related assets and depreciated until retirement of the assets. Changes in discount and inflation rates, if any, directly impact this carrying value. The discount rate and inflation rate were adjusted in 2024 to reflect current market assessments of the time value of money and the specific risks related to the provision. Besides the adjustment of the discount rate and inflation rate, also changes in underlying assumptions in the estimated decommissioning costs and updated price levels are included in the line item 'changes in estimates'. For more details on the changed assumptions of the decommissioning provision, please refer to note 16.

The amount of borrowing costs capitalised as part of assets under construction during 2024 is disclosed in note 26. The effective interest rate used to determine the amount of borrowing costs capitalised was 2.95% (2023: 1.86%).

Annual impairment trigger analyses on tangible assets, and where applicable testing for impairment, is done at the individual asset level, or smallest identifiable group of assets that generates cash inflows that are largely independent of the cash inflows from other assets or groups of assets (cash generating units ('CGUs')).

For TenneT's three operating segments this consists of:

- TSO Netherlands (one large CGU consisting of regulated on- and offshore assets, and the NorNed cable, considered for impairment (triggers), on individual level);
- TSO Germany (one large CGU consisting of regulated on- and offshore assets); and
- Non-regulated companies (several small CGUs as well as individual assets).

The non-regulated companies also include the joint venture investment in the BritNed cable, tested, for impairment (triggers), on individual level.

Off balance commitments related to tangible fixed assets are disclosed in note 23.

Key estimates and assumptions

To calculate depreciation amounts, the following useful lives of various asset categories were assumed:

	2024	2023
Substations		
Primary gear, including switches, and offshore converter stations	20-40	20-35
Offshore platforms	20-35	20-35
Security and control equipment	10-20	10-20
Power transformers	35-50	20-35
Capacitor banks	20-40	20-35
Telecommunications equipment	10-20	10-20
Buildings	40-50	40-50
Connections		
Pylons/lines	35-50	35-40
Cables (subsea and underground)	20-50	20-40
Other		
Office buildings	40-50	40-50
Office IT equipment	5	5
Process automation facilities	5	5
Other company assets	5-10	5-10

Estimated residual values, useful lives and methods of depreciation of assets are reassessed annually and are adjusted prospectively, if appropriate. The useful lives of power transformers and connections have been extended with respectively 15 years and 10 years, from 1 January 2024 onwards, resulting in a decrease of the depreciation. The change of the useful life of power transformers relates to the Netherlands only. Please, refer to note 1 for the impact on the depreciation expense on an annual basis.

Climate-related risks concerning the construction and operation of tangible fixed assets have been considered, not resulting in material adjustments in the valuation of these tangible fixed assets. These risks are already mitigated by adjusting the design or taking other specific measures.

ⓘ Accounting policies

Tangible fixed assets are valued at cost, net of accumulated depreciation and accumulated impairment losses, if any. Such costs include the cost of replacing part of the asset and borrowing costs for long-term construction projects if the recognition criteria are met. When material parts of the asset are required to be replaced at intervals, such parts are recognised as individual assets with specific useful lives and depreciated accordingly. Likewise, when major maintenance is performed, its cost is recognised in the carrying amount of the asset as a replacement, if the recognition criteria are met. All other repair and maintenance costs are recognised in the statement of income as incurred. The present value of the expected cost for the decommissioning of an asset after its use is included in the cost of the respective asset if the recognition criteria for a provision are met.

Cost also includes borrowing costs for long-term construction projects, if the recognition criteria are met. General and specific borrowing costs directly attributable to the acquisition, construction or production of the tangible fixed assets, are added to the cost, until such time that the assets are substantially ready for their intended use or sale. No borrowing costs are capitalised if and to the extent such borrowing costs are directly compensated in the year of construction. The present value of the expected cost for the decommissioning of an asset after its use is included in the cost of the respective asset as well, if the recognition criteria for a provision are met.

Depreciation is calculated on a straight line basis, as this best reflects the use of the assets. At each reporting date, TenneT assesses whether there is an indication that an asset may be impaired. If any indication exists (i.e. no future economic benefits are expected from its use), the asset's recoverable amount is estimated.

The recoverable amount is the higher end of an asset's or CGU's fair value less costs of disposal and its value in use. If the carrying amount of an asset or CGU exceeds its recoverable amount, the asset is considered impaired and is written down to its recoverable amount. Any gain or loss arising on derecognition of the asset (calculated as the difference between the net disposal proceeds and the carrying amount of the asset) is included in the statement of income when the asset is impaired or disposed.

4. Right of use assets and lease liabilities

Right of use assets

(EUR million)	Land & buildings	Power plants	NordLink cable	Other right of use assets	**Total**
At 1 January 2023	**141**	**109**	**441**	**57**	**748**
Additions	9	397	-	16	422
Disposals	-2	-	-	3	1
Remeasurement	9	-14	-10	2	-13
Depreciation	-23	-64	-71	-18	-176
Transfer to held for sale (note 1)	-5	-	-	-	-5
At 31 December 2023	**129**	**428**	**360**	**60**	**977**
Additions	18	230	-	34	282
Disposal	-	-	-	-	-
Transfer from intangible assets	19	-	-	-	19
Remeasurement	4	190	6	6	206
Depreciation	-26	-107	-73	-21	-227
At 31 December 2024	**144**	**741**	**293**	**79**	**1,257**

Leased land & buildings

Land is mainly leased to set up pylons for electricity transmission lines and for constructed substations. These contracts run for a period of 1-142 years (2023: 8-142 years). In addition, buildings are leased mainly as office space and for storage space. These contracts run for a period of 1-15 years (2023: 1-15 years), and are negotiated individually and include a range of different terms and conditions, including extension options. These extension options are accounted for insofar it is probable that these options will be exercised. Lease payment terms are in substance fixed, only a minority of the lease contracts contain clauses with reference to the consumer price index (CPI).

During 2024, the Company adjusted the classification of ground lands to better reflect the way of its contractual terms. As a result, EUR 19 million is reclassified from other intangible assets to right of use assets. Comparative figures have not been adjusted for this reclassification.

Leased power plants

TenneT is committed to the use of grid reserve power plants representing lease commitments. The commitments have a maturity of 1-9 years (2023: 1-10 years) and could be prolonged depending on the decision of regulatory authorities.

In 2024, TenneT agreed upon two contracts, which contains lease elements, to keep power plants operational in the Netherlands as well as in Germany, to ensure the security and reliability of the electricity supply system, in particular for the management of grid congestion and voltage support. Furthermore, multiple power plants have been prolonged in current year resulting in a remeasurement of the right of use assets for an amount of EUR 190 million.

Lease payments are in substance fixed, but TenneT has one power plant lease which contains one-off payments which comply with IFRS 16. No other variable lease payments are applicable. The lease contracts do not include any clauses with reference to an index or contractual rate.

Leased NordLink cable

TenneT leases the NordLink submarine cable from NOKA to transport electricity between Germany and Norway. It has a remaining maturity of 4 years without an extension option according to IFRS 16. Lease payments are in substance fixed.

Leased others

Telecom lease contracts (including fibreglass cables) run for a period between 1 and 30 years (2023: 5 and 30 years). For qualifying employees TenneT leases cars with a lease term between 1 and 8 years (2023: 1 and 8 years). TenneT does not purchase nor does it guarantee the value of leased telecom assets or leased cars. Several of these lease contracts contain termination and/or extension options. In determining the lease term all relevant facts and circumstances that create a significant economic incentive to exercise those options are taken into consideration. Lease payments are in substance fixed, only some of the lease contracts have pre-determined lease payment changes.

TenneT has no material 'sub lease' contracts in 2024 and 2023 and therefore no material income from subleasing right of use assets. TenneT has not entered into any sale and leaseback contracts. No lease contracts with residual value guarantees are entered into. No lease contracts have been concluded that contain restrictions or covenants.

Short-term leases and leases of low value

The aggregate total of lease expenses for low value assets and short-term leases, with a duration between one and twelve months, amounted to EUR 1 million (2023: EUR 2 million).

Lease liabilities

(EUR million)	**2024**			2023		
	Non-current	Current	**Total**	Non-current	Current	**Total**
Lease liabilities land & buildings	103	22	125	108	21	129
Lease liabilities power plants	653	99	752	359	83	442
Lease liability NordLink	212	67	279	272	64	336
Lease liabilities other leases	61	22	83	45	16	61
Total	**1,029**	**210**	**1,239**	**784**	**184**	**968**

(EUR million)	Lease liabilities land & buildings	Lease liabilities power plants	Lease liability NordLink	Lease liabilities other leases	**Total**
At 1 January 2023	**141**	**115**	**415**	**58**	**729**
Additions	9	397	-	16	422
Interest	2	4	11	1	18
Disposals	-	-4	-	-1	-5
Remeasurement	9	-14	-10	2	-13
Repayments	-26	-56	-80	-15	-177
Transfer to held for sale (note 1)	-6	-	-	-	-6
At 31 December 2023	**129**	**442**	**336**	**61**	**968**
Additions	18	220	-	35	273
Interest	2	22	11	2	37
Remeasurement	3	190	6	8	207
Repayments	-27	-122	-74	-23	-246
At 31 December 2024	**125**	**752**	**279**	**83**	**1,239**

The total cash outflow, including low value items and short-term leases, in 2024 was EUR 255 million (2023: EUR 179 million). There are no material future cash outflows of leases not yet commenced, but to which TenneT is committed.

In the table hereafter the total lease expense as recognised in the statement of income is disclosed:

(EUR million)	**2024**	2023
Depreciation expense of right of use assets	227	176
Short-term lease expenses	-	-
Interest expense on lease liabilities	37	18
Capitalised costs for (in)tangible fixed assets	-8	-8
Total amount recognised in profit and loss	**256**	**186**

The undiscounted maturity analysis of lease liabilities is disclosed in note 20. Hereafter the discounted maturity of the lease liabilities is presented:

(EUR million)	**2024**	2023
<1 month	18	15
1 to 3 months	34	28
3 to 12 months	159	142
1 to 5 years	707	518
More than 5 years	321	265
Total maturity	**1,239**	**968**

Key estimates and assumptions

To determine the total amount of lease liabilities, the present value of outstanding lease payments is calculated, using the interest rate implicit in the lease. If the interest implicit in the lease is not available, TenneT's incremental borrowing rate is used as discount rate, as this is assumed to be the best estimate of the implicit interest rate. The incremental borrowing rate used is shown in the table hereafter:

	2024	2023
Under 5 years	3.8%	2.6%
5-10 years	3.7%	3.2%
10-15 years	3.9%	3.5%
15-25 years	4.1%	3.7%
Above 25 years	4.5%	3.9%

Several lease contracts contain extension or termination options for which it is uncertain whether these will be exercised in the future. These options are accounted for insofar it is probable that these will be exercised. In determining the lease term all relevant facts and circumstances that create a significant economic incentive to exercise these options are taken into consideration. The estimated probability of exercising these options is reassessed annually.

Accounting policies

At inception of a contract, TenneT assesses whether a contract conveys the right to control the use of an identified asset for a period in exchange for consideration, in which case it is classified as a lease.

TenneT recognises a right of use asset and a lease liability at the lease commencement date. The asset is initially measured at cost, which comprises the initial amount of the lease liability adjusted for any lease payments made at or before the commencement date, plus any initial direct costs incurred and an estimate of costs to restore the underlying asset, less any lease incentives received. The lease asset is subsequently depreciated using the straight-line method from the commencement date to the earlier of the end of the useful life of the right of use asset or the end of the lease term, considered to be indicated by the lease term. The lease asset is periodically adjusted for certain remeasurements of the lease liability and impairment losses, if any.

The lease liability is initially measured at the present value of outstanding lease payments, discounted using the interest rate implicit in the lease (e.g. for car leases) or, if that rate cannot be readily determined, TenneT's incremental borrowing rate. After initial recognition, the lease liability is measured at the present value of the remaining lease payments using the effective interest method and is remeasured when there is a change in future lease payments arising from a change in an index or rate or if TenneT changes its assessment of whether it will exercise a purchase, extension or termination option. A corresponding adjustment is made to the carrying amount of the right of use asset with any excess over the carrying amount of the asset being recognised as profit or loss.

TenneT has elected not to recognise right of use assets and lease liabilities for short-term leases (leases with a term of 12 months or less) and leases of low-value assets. TenneT recognises the lease payments associated with these leases as an expense on a straight-line basis over the lease term or another systematic basis if that basis is more representative of the pattern of the lessee's benefit. Furthermore, TenneT has elected not to recognise the lease of intangible assets.

5. Intangible assets

(EUR million)	Goodwill	Software	Customer contracts	Other intangible assets	Intangible assets under construction	**Total**
Cost						
At 1 January 2023	**34**	**406**	**64**	**47**	**115**	**666**
Additions	-	12	-	1	114	127
Transfers	-	117	-	-	-117	-
Impairment	-	-	-	-	-2	-2
Deconsolidation of subsidiaries	-3	-	-	-6	-	-9
Transfer to held for sale (note 1)	-3	-	-	-1	-	-4
At 31 December 2023	**28**	**535**	**64**	**41**	**110**	**778**
Additions	-	8	-	-	126	134
Transfers	-	91	-	-26	-91	-26
Disposals	-	-3	-	-	-	-3
At 31 December 2024	**28**	**631**	**64**	**15**	**145**	**883**
Amortisation and impairment						
At 1 January 2023	**-**	**277**	**64**	**19**	**-**	**360**
Amortisation	-	45	-	1	-	46
Transfer to held for sale (note 1)	-	-	-	-1	-	-1
At 31 December 2023	**-**	**322**	**64**	**19**	**-**	**405**
Amortisation	-	53	-	1	-	54
Transfers	-	-	-	-7	-	-7
Disposals	-	-3	-	-	-	-3
At 31 December 2024	**-**	**372**	**64**	**13**	**-**	**449**
Net book value						
At 1 January 2023	34	129	-	28	115	306
At 31 December 2023	28	213	-	22	110	373
At 31 December 2024	28	259	-	2	145	434

At 31 December 2024, goodwill was allocated to the cash generating units ('CGUs') in the following operating segments: TSO Netherlands (EUR 3 million), TSO Germany (EUR 24 million) and non-regulated activities (EUR 1 million).

Additions to intangible assets under constructions mainly relate to customising activities of a new software systems. During 2024, EUR 66 million (2023: EUR 39 million) of software was internally developed. Reference is made to note 37 relating to the legal reserve relating to internally generated assets.

In addition, a net book value of EUR 19 million relating to ground land has been reclassified from other intangible assets to right of use assets. Comparative figures have not been adjusted for this reclassification.

Key estimates and assumptions

The useful lives of assets are uncertain and subject to judgement. To calculate amortisation amounts, the following useful lives of various asset categories were assumed:

	Years
Goodwill	Indefinite
Software	3-12
Other	5-15

Intangible assets, with the exception of goodwill, are assumed to have a fixed useful life within the ranges outlined above and are amortised over this useful life. The useful life is reassessed each reporting period. Intangible assets are amortised on a straight line basis, as this best reflects the use of the asset.

Goodwill is assumed to have an indefinite useful life and is therefore not amortised, but it is tested for impairment annually or more frequently, if events or changes in circumstances indicate a triggering event, either individually or at CGU level.

Impairment testing of goodwill

For the purpose of annual impairment testing, goodwill acquired in a business combination is allocated to each of the CGUs. For TenneT's three operating segments this consists of:

- TSO Netherlands (one large CGU consisting of regulated on- and offshore assets);
- TSO Germany (one large CGU consisting of regulated on- and offshore assets); and
- Non-regulated companies (several small CGU's).

In assessing value in use, the estimated future cash flows are discounted to their present value using a pre-tax discount rate that reflects TenneT's assessment of current market conditions in respect of the time value of money and the risks specific to the asset. In determining fair value less costs of disposal, an appropriate valuation model is used, if no recent market transactions can be identified.

The impairment calculation is based on detailed projections, which are prepared separately for each of the CGUs to which the individual assets are allocated. The projections take into account current regulatory parameters, considering expected future regulatory developments. Management believes that the resulting cash flows can be determined reliably and that they give an appropriate reflection of the CGU's cash flow generating potential.

The recoverable amount of the CGU TSO Germany was determined based on a value-in-use calculation using cash flow projections following TenneT's investment portfolio. The pre-tax discount rate applied to cash flow projections was 6.2% (2023: 6.0%). The cash flows were estimated on the basis of regulatory allowed returns and invested capital, based on TenneT's business plan and a transition period to reach a steady state. The terminal value is determined by the invested capital (adjusted for regulatory minus IFRS net book value ('NBV') of tangible fixed assets). TenneT concluded that the recoverable amount was significantly in excess of the carrying value and as such no impairment loss needed to be recognised.

ⓘ Accounting policies

Intangible assets are measured at acquisition cost on initial recognition. The cost of intangible assets acquired in a business combination is recognised at fair value at the date of acquisition. Following initial recognition, intangible assets are carried at cost less any accumulated amortisation and accumulated impairment losses. Intangible assets are amortised on a straight line basis, as this best reflects the use of the assets. Except for capitalised development costs, internally generated intangible assets are not capitalised and expenses are reflected in the statement of income in the period in which they are incurred.

Goodwill is initially measured at cost and represents the excess of (i) the consideration transferred over and (ii) TenneT's interest in the value of the net identifiable assets, liabilities and contingent liabilities of the acquiree and the amount of the non-controlling interest in the acquiree. After initial recognition, goodwill is measured at cost less any accumulated impairment losses.

At each reporting date, TenneT assesses whether there is an indication that an asset may be impaired. If any indication exists (i.e. no future economic benefits are expected from its use), or when annual impairment testing for an asset is required, the asset's recoverable amount is estimated. The recoverable amount is the higher end of an asset's or CGU's fair value less costs of disposal and its value in use. If the carrying amount of an asset or CGU exceeds its recoverable amount, the asset is considered impaired and is written down to its recoverable amount. Any gain or loss arising on derecognition of the asset (calculated as the difference between the net disposal proceeds and the carrying amount of the asset) is included in the statement of income when the asset is impaired or disposed.

6. Investments in joint ventures and associates

Joint ventures

TenneT has, directly or indirectly, equity stakes in the following entities that qualify as joint ventures:

Joint Venture	Legal seat	Country	2024	2023
BritNed Development Ltd ('BritNed')	Arnhem	Netherlands	50%	50%
DC Nordseekabel GmbH & Co. KG ('NOKA')	Bayreuth	Germany	50%	50%
Reddyn B.V.	Arnhem	Netherlands	50%	50%
VertiCer B.V.	Groningen	Netherlands	50%	50%
Flexcess GmbH	Bayreuth	Germany	50%	50%
National Energy Information Services B.V.	Groningen	Netherlands	50%	50%
TensZ B.V.	Rotterdam	Netherlands	50%	50%
Equigy B.V.	Arnhem	Netherlands	20%	20%
Open Tower Company ('OTC')[1]	Vianen	Netherlands	25%	25%

1 For this investment, joint control was exercised, despite unequal stakes. TenneT's share in OTC is considered as an investment of material value and it has been classified as held for sale as at 31 December 2024 and 31 December 2023, refer to note 1.

For all joint ventures equal equity stakes are applicable, except for Equigy B.V., for which joint control is exercised despite unequal equity stakes. Therefore, this investment is classified as joint venture as well.

The investments in BritNed and NOKA are each considered as an investment of material value. The other joint ventures, amounting to EUR 3 million at 31 December 2024 (2023: EUR 3 million), are considered immaterial per 31 December 2024 and are therefore not further disclosed. TenneT's share in result of these immaterial joint ventures amounted to EUR 2 million in 2024 (2023: EUR 1 million). In 2024, TenneT received EUR 2 million from other interests in joint ventures (2023: nil).

BritNed

BritNed is a joint venture with National Grid International Ltd (National Grid), the British TSO. It owns and operates a 1,000 MW 'Direct Current'(DC) inter-connector between the United Kingdom and the Netherlands. Operating costs and trading revenue are shared equally between TenneT and National Grid. BritNed had nil contingent liabilities (2023: EUR 2 million) mainly related to comfort letters issued. In 2024, EUR 31 million dividend was received from BritNed (2023: EUR 142 million).

TenneT Holding B.V. has, together with the other shareholder, National Grid Holding One plc, provided a parent company guarantee on the liabilities of BritNed.

NOKA

NordLink is an inter-connector between Norway and Germany, jointly owned by Statnett SF, TenneT and KfW IPEX-Bank GmbH (KfW) to establish an inter-connector between Norway and Germany under the project name 'NordLink'. Ownership of the inter-connector is equally split, with TenneT and KfW owning the southern part through NOKA, a jointly owned company, and Statnett owning the northern part. Operating costs and trading revenue are shared equally between NOKA and Statnett.

At 31 December 2024, NOKA had contingent liabilities of EUR 3 million (2023: EUR 2 million) mainly related to purchase obligations. During 2024, TenneT has withdrawn EUR 35 million from NOKA's capital (2023: EUR 34 million).

None of TenneT's joint ventures are permitted to distribute profits without the consent from all shareholders or partners.

Summarised financial information in respect of material joint ventures and reconciliation with their respective carrying amounts, of the investment in the consolidated financial statements is as follows:

Statement of financial position

(EUR million)	**2024**		2023	
	BritNed	**NOKA**	BritNed	NOKA
Non-current assets	430	728	446	780
Cash and cash equivalents	117	55	99	62
Other current assets	18	13	20	8
Non-current liabilities	-46	-70	-45	-76
Current liabilities	-112	-4	-106	-8
Equity	**407**	**722**	**414**	**766**
Ownership TenneT	50%	50%	*50%*	*50%*
Carrying amount of the investment	**204**	**362**	**207**	**383**

Statement of income

(EUR million)	**2024**		2023	
	BritNed	**NOKA**	BritNed	NOKA
Revenue	133	79	374	85
Depreciation and amortisation	-19	-42	-18	-40
Other costs	-37	-8	-32	-7
Operating result	**77**	**29**	**324**	**38**
Finance income and expenses	-2	-	-2	1
Income tax expenses	-20	-2	-78	-3
Result for the year[1]	**55**	**27**	**244**	**36**
Ownership TenneT	50%	50%	*50%*	*50%*
Group's share in result	**28**	**14**	**122**	**18**

1 Result for the year equals total comprehensive income

Associates

TenneT has, directly or indirectly, equity stakes in the following entities that qualify as associates:

Associates	Legal seat	Country	2024	2023
Holding des Gestionaires de Réseaux de Transport d'Electricité S.A.S. ('HGRT')	Paris	France	34.0%	34.0%
Energie Data Services Nederland B.V. ('EDSN')	Amersfoort	Netherlands	12.5%	12.5%
WL Winet B.V.[1]	Eindhoven	Netherlands	40.0%	40.0%
Beheerder Afsprakenstelsel B.V. ('BAS')	Amersfoort	Netherlands	25.0%	25.0%
LINK Digital GmbH	Würzburg	Germany	33.3%	0.0%
Joint Allocation Office ('JAO')	Luxembourg-Hamm	Luxembourg	8.0%	8.0%
TSCNET Services GmbH ('TSC')	Munich	Germany	12.5%	12.5%

1 WL Winet B.V. is classified as assets held for sale as at 31 December 2024 and 31 December 2023, refer to note 1.

The investment in HGRT is considered as an investment of material value. The other associates, amounting to EUR 2 million at 31 December 2024 (2023: EUR 1 million), are considered immaterial per 31 December 2024 and are therefore not further disclosed. Both TenneT TSO B.V. and TenneT TSO GmbH, have a share of 6.25% and 4% in respectively TSC and JAO. TenneT's share in result of these immaterial associates amounted to nil in 2024 (2023: nil). In 2024, TenneT received no dividend from the immaterial associates (2023: nil).

HGRT

HGRT holds a 49% stake in EPEX. EPEX is the exchange for the power spot markets for the 'North West Europe' region and the United Kingdom. At 31 December 2024, HGRT had no contingent liabilities outstanding (2023: nil). In 2024, EUR 5 million dividend was received (2023: EUR 4 million).

Summarised financial information in respect of material associates and reconciliation with their respective carrying amounts, of the investment in the consolidated financial statements is as follows:

Statement of financial position

(EUR million)	**2024**	2023
	HGRT	HGRT
Non-current assets	91	91
Current assets	-	1
Non-current liabilities	-	-
Current liabilities	-	-
Equity	**91**	**92**
Ownership TenneT	34%	*34%*
Carrying amount of the investment	**31**	**31**

Statement of income

(EUR million)	**2024**	2023
	HGRT	HGRT
Revenue	-	-
Depreciation and amortisation	-	-
Other costs	-	-
Operating result	**-**	**-**
Finance income and expenses	15	13
Income tax expenses	-	-
Result for the year[1]	**15**	**13**
Ownership TenneT	34%	*34%*
Group's share in result	**5**	**4**

1 Result for the year equals total comprehensive income

ⓘ Accounting policies

A joint venture is an arrangement whereby the parties in the arrangement have joint control over the net assets of the joint arrangement. Joint control is the contractually agreed sharing of control of an arrangement, which exists only when decisions about the relevant activities require unanimous consent of the parties sharing control. An associate is an entity in which TenneT has significant influence, but no control. Significant influence is the power to participate in the financial and operating policy decisions of the investor.

Investments in joint ventures and associates are accounted for using the equity method. Under the equity method, the investment in the joint venture or associate is initially recognised at cost. The carrying amount of the investment is adjusted to recognise changes in the Group's share of net assets of the investment since the acquisition date. Goodwill relating to the investment is included in the carrying amount of the investment and is neither amortised nor individually tested for impairment.

The statement of income reflects TenneT's share in the results of operations of investments. Any change in other comprehensive income of these investments is presented as part of the other comprehensive income. In addition, when there is a change recognised directly in the equity of the investment, TenneT's share of any change is recognised in the statement of changes in equity. Unrealised gains and losses resulting from transactions between TenneT and any investment are eliminated to the extent of the interest in such investment. When a joint venture or associate distributes dividend to TenneT in excess of TenneT's carrying amount, a liability is recognised if TenneT:

- Is obliged to refund the dividend;
- Has incurred a legal or constructive obligation; or
- Made payments on behalf of the associate.

In the absence of such obligations, the excess in net result for the period is recognised. When the joint venture or associate subsequently generates results, this is only recognised if and to the extent they exceed the excess cash distributions recognised in net results plus any previously unrecognised losses.

After application of the equity method, TenneT determines whether it is necessary to recognise an impairment loss on its investment in the joint venture or associate. At each reporting date, TenneT determines whether there is objective evidence that the investment is impaired. If such evidence exists, the amount of impairment is calculated as the excess of the carrying value of the investment over its recoverable amount and recognised in the statement of income.

Upon loss of significant influence over the joint venture or associate, any retained investment is valued at fair value. Any difference between the carrying amount of the investment upon loss of significant influence and the fair value of the retained investment and proceeds from disposal is recognised in the statement of income.

7. Other financial assets

(EUR million)	**2024**	2023
Fees for credit facilities available	1	2
Financial assets through profit or loss	13	15
Pension assets	27	14
Other	15	11
Total	**56**	**42**

Financial assets through profit and loss

The fees for credit facilities available relate to the sign-off fee for the RCF and the shareholder facility. The current part amounts to EUR 10 million, and is classified as part of account- and other receivables.

Financial assets through profit and loss

Financial assets through profit and loss includes investments in Westley Fund 3 and 4, located in Menlo Park, California, USA, with a fair value of EUR 6 million (2023: EUR 7 million), and in Set Ventures 2, 3 and 4 located in Amsterdam, for a fair value of EUR 7 million (2023: EUR 8 million). TenneT contributed EUR 1 million in capital for these minorities (2023: EUR 2 million), and recognised EUR 1 million (2023: EUR 2 million fair value loss) fair value loss. In addition, an amount of EUR 2 million (2023: nil) has been disposed in 2024.

Pension assets

Please, refer to note 17 for pension assets.

Other

Per 31 December 2024, the non-current part of a prepaid amount on a contract related to a recovery facility with a duration until 2032 is recognised as other. This amount will be partially released each period until maturity of the contract.

ⓘ Accounting policies

Please, refer to note 22 accounting policies for financial instruments.

8. Inventories

Inventories primarily consist of strategic stock of EUR 186 million (2023: EUR 134 million). The allowance for obsolete inventory is EUR -48 million (2023: EUR -7 million). The increase of the allowance for obsolete inventory is relating to the coal stock, which is reclassified from other receivables to inventories as the power plant went into the grid reserve, as the market price is lower than the purchase price. The fair value of inventory was not materially different from the carrying value.

In addition, during 2024, the Company adjusted the classification of work in progress to better reflect the way in which economic benefits are derived from its use. As a result, EUR 18 million is reclassified from inventories to tangible fixed assets under construction. Comparative figures have not been adjusted for this reclassification. The remaining work in progress, amounting to EUR 7 million (2023: EUR 16 million), relate to construction activities for third parties.

ⓘ Accounting policies

Inventories are stated at the lower of cost and net realisable value. Cost comprises direct purchase costs and associated costs incurred in bringing inventories to their present condition and location. The net realisable value is the estimated selling price in the ordinary course of business less the estimated costs of completion and the estimated costs necessary to make a sale.

9. Account- and other receivables

(EUR million)	**2024**	2023
EEG trade receivables	83	1,183
Amounts to be invoiced to EEG trade debtors	116	286
Trade receivables	622	562
Amounts to be invoiced	1,381	1,415
VAT receivables	252	262
Subsidies to be received	59	131
Receivables from relates parties	28	11
Other	89	91
Total	**2,630**	**3,941**

A list of all related parties is included in note 29 of the consolidated financial statements.

EEG trade receivables and amounts to be invoiced to EEG trade debtors

In accordance with the Renewable Energy Sources Act (EEG) TenneT TSO GmbH is required to purchase electricity from producers of renewable energy at fixed feed-in tariffs. Subsequently, such renewable energy is sold on power exchanges at spot prices.

EEG revenue and expenses are legally required to be administrated separately and are legally designated to be equal, except for certain potential bonus amounts payable to TenneT TSO GmbH for marketing the energy on the power exchange. The EEG surcharge was set to zero by law on 1 July 2022 and abolished with effect from 1 January 2023. Since then, the promotion of renewable energies has been financed by the federal budget. TenneT TSO GmbH acts as an agent with respect to these EEG services.

EEG trade receivables and amounts to be invoiced to EEG trade debtors relate to the outstanding invoices for the EEG levy, the accrual for the unbilled EEG levy, mainly over the month December, the accrual for horizontal balancing amounts (i.e. unsettled charges to the other German TSOs) and energy trading revenue. EEG trade receivables were not at TenneT's free disposal. Please, refer to note 19 for the EEG accounts payable, and to note 10 for EEG deposits.

Trade receivables

At 31 December, the ageing of trade receivables were as follows:

(EUR million)	**2024**	2023
Not past due	579	495
Past due		
0-30 days	37	27
31-60 days	4	25
More than 60 days	2	15
Total past due	**43**	**67**
Total	**622**	**562**

Changes in the allowance for expected credit losses ('ECLs') were as follows:

(EUR million)	**2024**	2023
At 1 January	**15**	**28**
Charge for the year	7	2
Utilisation of provision	-	-14
Unused amounts reversed	-	-1
At 31 December	**22**	**15**

At 31 December 2024, receivables with an initial value of EUR 11 million (2023: EUR 5 million) were fully provided for.

Amounts to be invoiced

The majority of the amounts to be invoiced relates to unbilled fees related to connection and transmission services, operation of energy exchanges and maintenance of the energy balance. The assessment of amounts to be invoiced between the date of the last information available from meter readings and year-end is primarily based on expected consumption and weather patterns. When the actual information is available (mostly within a month after year-end), the amounts to be invoiced are adjusted accordingly to reflect the latest information. The decrease is mainly because of the reassessment of the grid related accruals and its underlying estimation assumptions, refer to note 1 for more information, partly offset by higher tariffs in the Netherlands compared to 2023.

Subsidies to be received

The decrease of subsidies to be received is mainly due to the capped subsidies from 2025 onwards, and therefore a large part of the current year expenses that would be compensated through post-calculation in the offshore subsidy have now shifted to regular settlement in future tariffs.

ⓘ Accounting policies

Please, refer to note 22 accounting policies for financial instruments.

10. Cash and cash equivalents

Cash and cash equivalents consisted of the following items:

	2024			2023		
(EUR million)	At free disposal	Not at free disposal	**Total**	At free disposal	Not at free disposal	**Total**
Collateral securities	-	364	364	-	373	373
EEG funds	-	116	116	-	270	270
EEG deposits < 3 months	-	150	150	-	-	-
KWK funds	-	153	153	-	91	91
Strompreisbremse funds	-	75	75	-	20	20
Deposits < 3 months	-	2,050	2,050	-	-	-
Cash at bank	1,483	2	1,485	300	2	302
Total cash and cash equivalents used in cash flow statement	**1,483**	**2,910**	**4,393**	**300**	**756**	**1,056**

Funds related to EEG activities have been legally separated as required by BNetzA. EEG funds, including EEG deposits, are not at TenneT's free disposal. The same applies for funds related to KWK-G and Electricity Revenue Cap Act ('Strompreisbremse'). Reference is made to note 9 for more information about EEG. Furthermore, the deposits, excluding EEG, are at free disposal upon maturity date. Cash at bank carries interest at floating rates based on daily bank deposit rates. Collateral securities are related to other financial liabilities, please refer to note 18.

ⓘ Accounting policies

In the consolidated statement of cash flows, cash and cash equivalents include cash at bank, deposits held at call with banks and other short-term highly liquid investments with remaining maturities of three months or less and are presented net of outstanding bank overdrafts. Securities are deposits on collaterals that serve as financial security for transactions relating to auction, energy exchange and balancing responsibilities. A matching obligation is recognised towards the party that deposited the funds as collateral. Securities are stated at fair value upon receipt and subsequently at amortised cost.

The Group presents its cash flows in the consolidated statement of cash flows using the indirect method. The Group has elected to classify interest received as cash flows from investing activities and interest paid, including interest on lease liabilities, as cash flows from financing activities.

11. Capital management

The primary objective of TenneT's capital structure is to ensure a sustainable financial position to absorb adverse changes in the regulatory environment and to enable TenneT to execute its extensive investment programme which is essential for the success of the energy transition in the Netherlands and Germany. The majority of the funding for TenneT's investment programme is sourced from the debt capital markets, commercial banks, shareholder loans and international financial institutions (e.g. the European Investment Bank ('EIB')).

To maintain broad access to financial markets at favourable conditions, TenneT has defined capital management objectives, policies and processes which include:

- To maintain a credit rating of at least A3/A-;
- To maintain a long-term average adjusted Funds From Operations (FFO) to Net debt based on 'underlying' financial information of at least 8.5% (with individual years of at least 8.0%);
- To diversify the maturities of long-term funding instruments to limit refinancing risk;
- To maintain liquidity through cash and undrawn committed credit lines covering at least TenneT's net cash requirement on a rolling 12-month forward-looking basis.

Capital consists of equity and debt.

1. Maintain a credit rating of at least A3/A-

As of 31 December 2024, TenneT has the following senior unsecured long-term credit ratings from Standard & Poor's and Moody's Investor Service, which comply with TenneT's financial policy.

Unsecured credit rating at 31 December 2023 and 31 December 2024	Long-term rating	Short-term rating
Standard & Poor's	A– (stable outlook)	A-2
Moody's Investor Service	A3 (stable outlook)	P-2

2. Maintain a long-term average adjusted FFO/Net debt ratio based on underlying financial information of at least 8.5%

TenneT has the objective to maintain a credit rating of at least A3/A-. To realise this objective, TenneT maintains a long-term average FFO to net debt ratio of at least 8.5% (with individual years of at least 8.0%) based on underlying financial information (refer to note 2). Such ratio meets the minimum requirements for an A3/A- credit rating as formulated by the credit rating agencies Standard & Poor's and Moody's Investor Service. Individual years have a FFO/Net debt of at least 8.0%.

A reconciliation of the adjusted FFO and net debt is provided in the following table. Please, refer to the chapter 'Secure a sustainable financial performance and investor rating' for detailed information about the adjusted FFO.

Based on underlying information (EUR million)	Notes	**2024**	2023
Net result for the year		868	1,071
+ amortisation, depreciation and impairments		1,485	1,369
+ other (gains)/losses (non-cash)		12	-5
+ result on disposal of assets (non-cash)		-	-
Total FFO		**2,365**	**2,435**
Capitalised interest on assets under construction	26	-39	-25
Interest on provisions	26	49	32
50% Hybrid interest	12	-39	-28
Adjusted FFO		**2,336**	**2,414**
Net debt			
+ Long-term borrowings	14	31,366	18,871
+ Short-term borrowings	14	568	3,640
- Cash and cash equivalents at free disposal plus deposits < 3 months (excluding EEG)	10	-3,533	-300
- To be settled in tariffs	2	-2,589	-3,565
Lease liabilities	4	1,239	974
Net employee defined benefit liabilities	17	240	217
50% Hybrid loan	12	1,070	1,062
Net debt		**28,361**	**20,899**
Adjusted FFO/net debt		**8.2%**	**11.6%**

3. Diversify maturities of long-term funding instruments to limit refinancing risk

To minimise refinancing risk, TenneT diversifies the maturity profile of its senior debt. As of 31 December 2024, TenneT's interest bearing debt (excluding bank overdrafts) had the following annual redemption profile:

Year	Maturities	Year	Maturities	Year	Maturities
2025	568	2033	2,561	2041	698
2026	1,973	2034	2,356	2042	1,738
2027	1,225	2035	2,311	2043	28
2028	1,282	2036	2,391	2044	28
2029	1,749	2037	1,461	2045	21
2030	1,546	2038	1,554	2046	14
2031	2,779	2039	1,548	2047	10
2032	2,196	2040	1,998		

4. Maintaining liquidity through cash and undrawn committed credit lines covering at least TenneT's net cash requirement on a rolling 12-month forward-looking basis

TenneT monitors the liquidity of the Group on a rolling 12-month forward-looking basis. This means that the sum of (i) cash and cash equivalents, (ii) undrawn committed credit facilities and (iii) 12-month expected net cash flow from operating activities should be sufficient to meet the expected aggregate of scheduled debt repayments, investments in fixed assets and dividend payments over the subsequent 12 months. The 12-month liquidity requirement was met on 31 December 2024 and 31 December 2023.

12. Equity

Paid-up and called-up capital

The Company's authorised share capital amounted to EUR 500 million (2023: EUR 500 million), divided into one million shares of EUR 500 each. Of these shares, two hundred thousand shares have been issued and paid-up.

Share premium reserve

The share premium reserve consists of the capital contributions, made by the Shareholder of ordinary shares, the Dutch state represented by the Ministry of Finance. Furthermore, the contribution received from the Shareholder for an amount of EUR 1.6 billion last year has been reclassified from current financial liability to equity as the shares in TenneT Germany will not be transferred for 100% to KfW. The latter was a condition for distribution of the EUR 1.6 billion to the Shareholder and that condition is not met as the negotiations were terminated (refer also to note 1).

Retained earnings

Part of the retained earnings has been presented as legal reserve. For more details refer to note 37.

Hybrid securities

Hybrid securities are subordinated securities and are, with the exception of common equity, the most junior instruments in the capital structure of the Company. The hybrid securities are undated and do not default on non-payment of coupons (unless such payment was mandatory following a resolution or payment of a dividend to common shareholders, i.e. as so called ‘dividend pusher’).

The holders of the hybrid securities have limited ability to influence the outcome of a bankruptcy proceeding or a restructuring outside bankruptcy. Consequently, the hybrid security holders cannot oblige TenneT to pay distributions or redeem the securities in part or in full. Payment of distributions on and redemption of the securities is at TenneT's sole discretion. As a result, the hybrid securities are classified as part of the equity attributable to the company's owners.

The hybrid security issued in April 2017 of EUR 1 billion and the hybrid security issued in August 2018 of EUR 100 million were redeemed in May 2024.

On 31 December 2024, TenneT had EUR 2.1 billion of green hybrid securities outstanding divided in issued hybrid securities.

The first hybrid security consisted of EUR 1 billion green hybrid securities that bear an optional, cumulative coupon of 2.374%, payable at TenneT's discretion annually on 22 October of each year. At 31 December 2024, the unpaid cumulative dividend for this tranche amounted to EUR 7 million (2023: EUR 7 million) for the period 23 October till 31 December.

The second hybrid security relates to the issued dual tranche hybrid security of each EUR 550 million in March 2024. The first tranche bears an optional, cumulative coupon of 4.625%, payable at TenneT's discretion annually on 21 June of each year. The second tranche bears an optional, cumulative coupon of 4.875%, payable at TenneT's discretion annually on 21 March of each year. At 31 December 2024, the unpaid cumulative dividend for this dual tranche amounted to respectively EUR 13 million for the period 23 March till 31 December and EUR 20 million for the period 22 June till 31 December.

Dividend distribution

In 2024, a common full-year dividend of EUR 150 million (EUR 750 per share) to TenneT's ordinary shareholder was distributed (2023: EUR 207 million; EUR 1,035 per share). In agreement with our shareholder, the Dutch state of the Netherlands, TenneT will not pay dividend over the year 2024 to the shareholder in 2025. TenneT made aggregate distributions to the holders of hybrid securities of EUR 63 million during 2024 (2023: EUR 57 million). The appropriation of the 2024 result is at the free disposal of the General Meeting of Shareholders.

13. Non-controlling interests

The proportion of economic interests held by non-controlling interests in the Group's subsidiaries is as follows:

% Non-Controlling Interests	Country	**2024**	2023
TenneT Offshore 2. Beteiligungsgesellschaft mbH ('TO2')	Germany	69%	69%
TenneT Offshore 8. Beteiligungsgesellschaft mbH ('TO8')	Germany	63%	63%

The non-controlling interests in TO2 and TO8 are held by Copenhagen Infrastructure Partners ('CIP'; legal seat: Copenhagen, Denmark), which owns an economic interest of 69% for TO2 and 63% for TO8 in the adjusted (for certain regulatory effects) profits of these companies and 49% of the voting rights.

The Group has the power to control TO2 and TO8, and holds 51% of the voting rights in these entities. Movements in the non-controlling interest, to the extent material, are summarised in the table hereafter.

(EUR million)	TO2	TO8	**Total**
At 1 January 2023	**242**	**213**	**455**
Result attributable to non-controlling interests	41	18	59
Dividends paid	-16	-1	-17
Capital repayment	-53	-44	-97
At 31 December 2023	**214**	**186**	**400**
Result attributable to non-controlling interests	-2	7	5
Capital contribution	20	5	25
Dividends paid	-16	-10	-26
Capital repayment	-32	-18	-50
At 31 December 2024	**184**	**170**	**354**

Financial information of these subsidiaries, to the extent material, is summarised hereafter on a consolidated basis before inter-company eliminations and in conformity with TenneT's accounting principles.

Statement of financial position

		2024			2023	
(EUR million)	TO2	TO8	**Total**	TO2	TO8	**Total**
Non-current assets	722	1,066	1,788	817	1,155	1,972
Current assets	152	107	259	153	122	275
Non-current liabilities	-550	-826	-1,376	-594	-880	-1,474
Current liabilities	-60	-74	-134	-69	-99	-168
Equity	**264**	**273**	**537**	**307**	**298**	**605**
Attributable to owners of the parent	82	101	183	93	112	205
Attributable to non-controlling interests	182	172	354	214	186	400

Statement of income

	2024			2023		
(EUR million)	TO2	TO8	**Total**	TO2	TO8	**Total**
Revenue	160	195	355	222	222	444
Depreciation and amortisation	-90	-100	-190	-78	-100	-178
Other expenses	-68	-64	-132	-52	-62	-114
Operating result	**2**	**31**	**33**	**92**	**60**	**152**
Finance income and expenses	-7	-14	-21	-8	-18	-26
Income tax expense	1	-5	-4	-25	-13	-38
Result for the year[1]	**-4**	**12**	**8**	**59**	**29**	**88**
Attributable to owners of the parent	-2	5	3	18	11	29
Attributable to non-controlling interests	-2	7	5	41	18	59

1 Result for the year equals total comprehensive income

Statement of cash flows

	2024			2023		
(EUR million)	TO2	TO8	**Total**	TO2	TO8	**Total**
Net cash flows from operating activities	68	57	125	150	107	257
Net cash flows used in investing activities	2	2	4	3	6	9
Net cash flows from financing activities	-70	-59	-129	-153	-113	-266
Change in cash and cash equivalents	**-**	**-**	**-**	**-**	**-**	**-**

14. Borrowings

(EUR million)

%	Year of issuance	Nominal value of loan	Effective interest rate 2024	Maturity	Redemption schedule	**2024**	2023
Non-current loans							
1.750%	2015	500	1.84%	Jun-27	At maturity	499	499
1.000%	2016	500	1.05%	Jun-26	At maturity	500	499
1.250%	2016	500	1.37%	Oct-33	At maturity	496	495
1.875%	2016	500	2.00%	Jun-36	At maturity	494	494
0.750%	2017	500	-	Jun-25	At maturity	-	499
1.375%	2017	500	1.42%	Jun-29	At maturity	499	499
1.375%	2018	500	1.50%	Jun-28	At maturity	498	497
2.000%	2018	750	2.06%	Jun-34	At maturity	747	747
0.875%	2019	500	0.99%	Jun-30	At maturity	497	497
1.500%	2019	750	1.60%	Jun-39	At maturity	742	741
0.125%	2020	600	0.21%	Nov-32	At maturity	596	596
0.500%	2020	750	0.54%	Nov-40	At maturity	745	745
0.125%	2021	650	0.17%	Dec-27	At maturity	649	649
0.500%	2021	500	0.61%	Jun-31	At maturity	497	496
0.875%	2021	1,000	0.93%	Jun-35	At maturity	995	994
1.125%	2021	650	1.17%	Jun-41	At maturity	646	646
1.625%	2022	1,250	1.79%	Nov-26	At maturity	1,246	1,244
3.875%	2022	650	3.95%	Oct-28	At maturity	649	648
2.125%	2022	1,000	2.25%	Nov-29	At maturity	995	994
4.250%	2022	500	4.35%	Apr-32	At maturity	498	497
2.375%	2022	750	2.51%	May-33	At maturity	743	742
4.500%	2022	1,000	4.60%	Oct-34	At maturity	994	994
2.750%	2022	850	2.91%	May-42	At maturity	835	835
4.750%	2022	850	4.85%	Oct-42	At maturity	843	842
Total green bonds						**15,903**	**16,389**

(EUR million)

%	Year of issuance	Nominal value of loan	Effective interest rate 2024	Maturity	Redemption schedule	**2024**	2023
4.750%	2010	200	4.99%	Jun-30	At maturity	198	198
Total bonds						**198**	**198**
Non-current interest-bearing bonds						**16,101**	**16,587**
0.717%	2015	500	0.72%	2018-2032	Linear	241	276
0.766%	2015	150	0.77%	2018-2037	Linear	90	97
0.813%	2016	125	0.81%	2019-2038	Linear	81	88
0.050%	2020	100	0.05%	Sep-26	At maturity	100	100
0.436%	2020	150	0.44%	2025-2042	Linear	330	350
0.562%	2022	250	0.56%	2025-2045	Linear	250	250
Floating rate	2024	250	1.17%	2024-2047	Linear	250	-
Floating rate	2022-2024	300	-	Aug-24	At maturity	-	300
Non-current interest-bearing loans						**1,342**	**1,461**
1.310%	2016	55	1.33%	May-26	At maturity	55	55
1.500%	2016	50	1.52%	May-28	At maturity	50	50
1.750%	2016	43	1.77%	May-31	At maturity	43	43
1.750%	2016	95	1.77%	May-31	At maturity	95	95
2.000%	2016	80	2.02%	May-36	At maturity	80	80
Non-current interest-bearing Schuldschein						**323**	**323**
1.610%	2019	160	1.64%	Jan-29	At maturity	160	160
1.830%	2019	295	1.86%	Jan-31	At maturity	295	295
2.010%	2019	45	2.03%	Jan-34	At maturity	45	45
Total non-current interest-bearing USPP						**500**	**500**

(EUR million)

%	Year of issuance	Nominal value of loan	Effective interest rate 2024	Maturity	Redemption schedule	**2024**	2023
3.236%	2024	750	2.37%	Dec-30	At maturity	750	-
3.378%	2024	1,750	2.70%	Nov-31	At maturity	1,750	-
3.416%	2024	1,000	2.22%	Nov-32	At maturity	1,000	-
3.292%	2024	1,250	1.03%	Dec-33	At maturity	1,250	-
3.289%	2024	500	0.76%	Nov-34	At maturity	500	-
3.379%	2024	750	0.51%	Nov-35	At maturity	750	-
3.713%	2024	500	1.48%	Nov-35	At maturity	500	-
3.617%	2024	750	2.90%	Apr-36	At maturity	750	-
3.551%	2024	1,000	2.60%	Nov-36	At maturity	1,000	-
3.574%	2024	750	2.62%	Apr-37	At maturity	750	-
3.494%	2024	650	0.26%	Dec-37	At maturity	650	-
3.783%	2024	1,000	2.16%	Jun-38	At maturity	1,000	-
3.594%	2024	500	0.54%	Nov-38	At maturity	500	-
3.649%	2024	750	0.85%	Nov-39	At maturity	750	-
4.049%	2024	500	1.96%	Jun-40	At maturity	500	-
3.638%	2024	700	0.27%	Nov-40	At maturity	700	-
Total non-current interest-bearing Shareholder loans						**13,100**	**-**
Total non-current interest-bearing borrowings						**31,366**	**18,871**
Current loans							
0.750%	2017	500	0.88%	Jun-25	At maturity	500	-
Current interest-bearing bonds						**500**	**-**
0.989%	2016	100		May-24	At maturity	-	100
Current interest-bearing Schuldschein						**-**	**100**

(EUR million)							
%	Year of issuance	Nominal value of loan	Effective interest rate 2024	Maturity	Redemption schedule	**2024**	2023
0.717%	2015	500	0.72%	Oct-25	Linear	34	34
0.766%	2015	150	0.77%	Apr-25	Linear	8	8
0.813%	2016	125	0.81%	Oct-25	Linear	6	6
0.436%	2020	350	0.44%	Oct-25	Linear	20	-
Cash loans					At maturity	-	540
Commercial papers					At maturity	-	2,372
Borrowings under committed bilateral bank credit facilities					At maturity	-	380
Borrowings under uncommitted bilateral bank credit facilities					At maturity	-	200
Current interest-bearing loans						**68**	**3,540**
Total current interest-bearing borrowings						**568**	**3,640**
Total borrowings						**31,934**	**22,511**

TenneT has developed a Green Financing Framework to finance its renewable energy activities. The Green Financing Framework is aligned to the 2021 ICMA Green Bond Principles ('GBP') and the 2021 LMA Green Loan Principles ('GLP') and addresses their four pillars; (i) Use of Proceeds, (ii) Process for Project Evaluation and Selection, (iii) Management of Proceeds and (iv) Reporting. Under this framework TenneT has issued across different formats (senior bonds, hybrid bonds, US Private Placement and Schuldschein).

Changes in borrowings arising from financing activities are as follows:

(EUR million)	(Non) - current interest-bearing bonds	(Non) - current interest-bearing loans	Non-current interest-bearing Shareholder loans	(Non)-current interest-bearing Schuldschein	Non-current interest-bearing USPP	**Total**
At 1 January 2023	**17,074**	**1,718**	**-**	**423**	**500**	**19,715**
Cash inflow from new borrowings	-	3,787	-	-	-	3,787
Cash outflow from redemptions	-500	-504	-	-	-	-1,004
Amortisation (non-cash)	13	-		-	-	13
At 31 December 2023	**16,587**	**5,001**	**-**	**423**	**500**	**22,511**
Cash inflow from new borrowings	-	250	13,100	-	-	13,350
Cash outflow from redemptions	-	-3,841	-	-100	-	-3,941
Amortisation (non-cash)	14	-	-	-	-	14
At 31 December 2024	**16,601**	**1,410**	**13,100**	**323**	**500**	**31,934**

TenneT has a Revolving Credit Facility ('RCF') of EUR 3.3 billion at 31 December 2024, which is available till November 2026. At 31 December 2024, this facility was undrawn. Furthermore, TenneT has also EUR 450 million of undrawn long-term loan commitments from the EIB available at 31 December 2024.

In addition, TenneT has EUR 250 million of committed bilateral RCFs (nil drawn), bank overdraft facilities of EUR 450 million (nil drawn) and uncommitted bank facilities of EUR 500 million (nil drawn) at its disposal at 31 December 2024.

At 12 January 2024, TenneT and the Dutch state have agreed upon a shareholder loan facility of EUR 25.0 billion to safeguard the financing of TenneT's planned investments in the Netherlands and Germany for 2024 and 2025. The loan facility relating to 2024, amounting to EUR 13.1 billion, is fully drawn. The undrawn facility for the year 2025 related to the current facility is EUR 11.9 billion. At 21 February 2025, TenneT and the Dutch state have agreed upon a supplementary shareholder loan facility of EUR 19.4 billion, safeguarding TenneT's planned investments in the Netherlands and Germany for 2025 and 2026. The shareholder loan facility for the years 2025 and 2026 amount to respectively EUR 2.3 billion and EUR 17.1 billion. The loans drawn from the facility will be granted at market conditions.

The amount of capitalised borrowing costs, including fair value adjustments, decreased to EUR 99 million compared to previous year because of the increased interest rates and shorter maturity leading to lower fair value for bonds (2023: minus EUR 116 million).

For more information about the fair value, refer to note 21.

ⓘ Accounting policies

Please, refer to note 22 accounting policies for financial instruments.

15. Contract liabilities

The movements in the contract liabilities are as follows:

(EUR million)	**2024**	2023
At 1 January	**627**	**548**
Addition	160	94
Amortisation	-14	-15
At 31 December	**773**	**627**

Contract liabilities are related to investment contributions from customers for specific tangible fixed assets of TenneT. Additions in contract liabilities mainly relate to investment contributions from customers intended for new grid connections to be connected to the high-voltage grid, which need to be paid by the concerning customers.

The maturities of the contract liabilities are disclosed in the following table:

(EUR million)	**2024**	2023
< 1 year	14	15
1-5 years	54	52
> 5 years	705	560
Total	**773**	**627**

ⓘ Accounting policies

Contract liabilities are recognised when payments are received or when the payments are due (whichever is earlier) before a related performance obligation is satisfied. Contract liabilities are recognised in accordance with the related contract. At initial recognition, contributions received from third parties are measured at transaction price, presented as contract liabilities ('investment contributions') and are subsequently amortised and recognised as revenue over the related assets useful life.

16. Provisions

	2024			2023		
(EUR million)	Non-current	Current	**Total**	Non-current	Current	**Total**
Decommissioning	1,607	5	1,612	1,613	5	1,618
Other	119	559	678	113	106	219
Total	**1,726**	**564**	**2,290**	**1,726**	**111**	**1,837**

The movements in the provisions are as follows:

(EUR million)	Decommissioning	Other	**Total**
At 1 January 2023	**1,110**	**202**	**1,312**
Additions	101	95	196
Utilisation	-1	-46	-47
Changes in estimates	380	5	385
Unused amounts reversed	-	-38	-38
Imputed interest	28	2	30
Transfer to held for sale (note 1)	-	-1	-1
At 31 December 2023	**1,618**	**219**	**1,837**
Additions	107	493	600
Utilisation	-	-25	-25
Changes in estimates	-159	-	-159
Unused amounts reversed	-	-12	-12
Imputed interest	46	3	49
At 31 December 2024	**1,612**	**678**	**2,290**

Decommissioning provision

The decommissioning provision is mainly related to TenneT's offshore assets, i.e. offshore platforms and sub-sea cables, including the interconnectors. For all of the offshore assets legal and constructive asset retirement obligations exist for decommissioning these assets at the end of the useful lives or at the end date of the related permits. Therefore, a decommissioning provision is recognised, for which the estimated total asset removal costs are capitalised as part of the carrying value of the related assets and depreciated until retirement of the assets.

In 2024, EUR 107 million was added (2023: EUR 101 million) for expected future decommissioning costs for projects constructed during 2024. Changes in estimates amounting to EUR -159 million (2023: EUR -380 million), are mainly coming from the Netherlands due to changes in the estimated future removal costs (EUR -106 million), the used inflation rate (EUR -31 million), the used discount rate (EUR -23 million) and updated price levels (EUR 6 million). The imputed interest for 2024 is recognised in the statement of income as a finance expense of EUR 46 million (2023: EUR 28 million). No offshore assets have been decommissioned in 2024 or 2023. In line with current regulation and permits, the first decommissioning of offshore assets is expected to be finalised in 2029.

Other provisions

The other provisions as per 31 December 2024 mainly consists of legal claims of EUR 553 million (2023: EUR 105 million), environmental obligations of EUR 64 million (2023: EUR 66 million) and provision for long-term service bonuses of EUR 46 million (2023: EUR 36 million).

The legal claims mainly relate to project claims concerning assets under construction, for which the estimated additional payments are capitalised. Where compensation claims will be reimbursed through regulation, a receivable has been recognised. The increase mainly coming from the delay in completing a grid connection system, resulting in a low triple-digit million amount being recognised as a provision, and corresponding claims for reimbursement were recognised accordingly. The key parameters for the provision are the expected duration of the delay, the energy market prices and the wind profile at sea.

Regarding long-term service bonuses TenneT has future obligations under the collective labour agreement involving the payment of bonuses to long-serving and retiring employees on their retirement date. The associated provision has been calculated on the basis of actuarial principles, including the main assumptions of future salary increases, leave chances and age-dependent retention rates.

✪ Key estimates and assumptions

The provision for environmental management and decommissioning involves:

1. estimating the future decommissioning costs;
2. estimating the expected remaining useful life including the start of the decommissioning of the relevant asset;
3. estimating the applicable discount rate and (future) inflation rate.

The main uncertainties related to the estimated future decommissioning costs are the required removal procedures and techniques, the future availability of equipment and vessels, market rates at expected time of decommissioning and possible changes in legislation, policies and permits applicable to offshore assets and their removal. As of 31 December 2024, new information was available regarding updated underlying assumptions. Based on this new information, the Group concluded that several assumptions and estimates in the determination of the total estimated decommissioning costs needed to be updated. For the impact of these changes in estimates on the decommissioning provision and the corresponding asset retirement cost, please refer to note 1.

Decommissioning costs are provided for at the net present value of estimated future costs to settle the obligation. The useful life of the offshore assets is estimated at 20 till 35 years and for interconnector cables the useful life is estimated at 40 years, in accordance with the useful lives as disclosed in note 3. Decommissioning will commence at the end of the useful life of the offshore assets, also taking into account the end of the permit period for operating the offshore assets.

The discount rate and inflation rate were adjusted in 2024 to reflect current market assessments of the time value of money and the specific risks related to the provision. For the decommissioning provision a discount rate between 2.290% and 2.750% (2023: between 2.476% and 2.509%) and an expected future inflation rate between 1.840% and 2.208% (2023: between 2.254% and 2.443%) was assumed. A change in the discount rate of 1 percent point would have a maximum impact of EUR 222 million on the asset value and liability value.

The provision for legal claims is subject to significant judgement and reflects TenneT's best estimate of the probable outflow of resources for each individual case. The provisions for long-term service and retirement bonuses have been calculated on the basis of actuarial principles. A discount rate of 2.6% was applied for other provisions (2023: 3.0%). A change in discount rate of 1 percent point would have a maximum impact of EUR 5 million on the related book value.

TenneT is of the opinion that the recognised provisions reflect the best estimate of the probable outflow of resources. However, uncertainty about the assumptions and estimates could result in outcomes that require a material adjustment to the carrying amount of these provisions in future periods. For disclosure of contingent liabilities please refer to note 23.

ⓘ Accounting policies

Provisions are recognised when there is (i) a legal or constructive obligation as a result of past events, (ii) it is probable that an outflow of resources embodying economic benefits will be required to settle the obligation and (iii) when the amount can be reliably estimated. Provisions are measured at the present value of estimated cash flows to settle obligations, based on expected price levels. Cash flows are discounted at a pre-tax rate that reflects the risks specific to the liability. The unwinding of interest components associated with provisions is recognised in the statement of income as a finance expense.

Estimated future costs are reviewed annually and adjusted as appropriate. Changes in estimated future costs and discount rates for decommissioning costs are recognised as changes in estimations and recorded in tangible fixed assets. All other provisions changes in estimated future costs and discount rates are recognised in the statement of income.

17. Net employee defined benefit liabilities

Pension plans Germany

TenneT has defined benefit plans for the majority of its German personnel. Said personnel are mainly employed based on the collective labour agreement of 'Tarifgruppe Energie' and thus enjoy benefits in the form of old-age, disability and surviving dependents' pensions. The large majority of the benefit obligations are based on pension schemes that define annual pension claims based on respective employees' pensionable income of a particular year. Furthermore, each employee is allowed to defer a certain amount of their compensation to raise his pension claim within defined bounds.

The Group contributes to two post-employment defined benefit plans in Germany, pursuant to a works council agreement called 'Betriebliche Alterssicherung' (hereafter referred to as 'pension scheme 2001') and a works council agreement called 'Beitragsplan' (hereafter referred to as 'pension scheme 2008'), as well as to a small number of individual pension commitments. The pension obligations related to these plans are partly covered by assets held in two Contractual Trust Arrangements (CTA) administrated by ‘Helaba Pension Trust e.V.’ (Helaba). According to German law, TenneT remains ultimately liable for fulfilling these pension obligations.

Pension scheme 2001

This scheme covers employees who started their employment with TenneT TSO GmbH on or before 31 December 2007 (or later if the individual employment contract was agreed on or before 1 April 2008). The scheme became effective on 1 January 2001 and absorbed older plans at the time. As part of the transition in 2001 to the new plan, employees were guaranteed a vested pension claim based on the old plan for their years of service prior to the transition date. The plan offers benefits in the form of old-age, disability and surviving dependents' pensions and is composed of an employer-funded basic level based on the respective employee's yearly pensionable income, an employer-funded top-up level based on the respective company's

performance and an employee-funded supplementary level which allows employees to increase their pension entitlement through deferred compensation. Yearly fixed pension claims are calculated with a fixed internal interest rate that sum up to the total earned pension benefits of the respective employee.

Pension scheme 2008

This scheme covers employees who started their employment with TenneT TSO GmbH after 31 December 2007 (unless the individual employment contract was agreed before 1 April 2008, in which case the pension scheme 2001 applies). This scheme offers benefits in the form of old-age, disability and surviving dependents' pensions.

Pension cost is composed on the employer-funded basic level based on the respective employee's yearly pensionable income, an employer funded top-up level based on the respective company's performance and an employee-funded supplementary level which allows employees to increase their pension entitlement through deferred compensation. If the employee contribution to the supplementary level reaches a certain level, the company pays an additional contribution of one-third of the respective basic level contribution.

Annually, for each year a contribution to the pension claims is increased with an interest rate that is recalculated based on the weighted average current yield of German Federal Government Bonds (Bundesanleihen), with an effective floor of 3.0% and with different maturities (10, 20 and 30 years) reflecting the average duration of the plan. The annual pension claim contributions for all years of service sum up to the total earned pension benefits of the respective employee.

Differences between the plans are limited and refer mainly to the way internal interest rates and the pensionable income are determined. Therefore, the disclosure in the notes hereafter comprises the combined plans.

The funded status of the plans and the amounts recognised in the statement of financial position were as follows:

(EUR million)	**2024**	2023
Defined benefit obligation	333	314
Fair value of plan assets	-116	-109
Funded status	**217**	**205**
Benefit asset included in other financial assets	26	14
Defined benefit liability	**243**	**219**

The defined benefit liabilities at 31 December are presented in the table hereafter. The short-term part of the benefit liability is presented as provisions.

(EUR million)	**2024**	2023
Defined benefit liability long-term	240	217
Defined benefit liability short-term	3	2
Total defined benefit liability	**243**	**219**

Changes in the present value of the long-term defined benefit obligation ('DBO') over the year were as follows:

(EUR million)	**2024**	2023
Defined benefit obligation at 1 January	**314**	**265**
Current service costs	15	11
Interest costs	10	10
Contributions by plan participants	3	3
Benefits paid	-5	-6
Remeasurements	-4	31
Defined benefit obligation at 31 December	**333**	**314**

Remeasurements are mainly due to the change of the discount rate from 3.45% to 3.5%.

Changes in the fair value of plan assets at 31 December of the year were as follows:

(EUR million)	**2024**	2023
Fair value of plan assets at 1 January	**109**	**103**
Actual return on plan assets	7	6
Contributions by employer	5	5
Benefits paid	-5	-5
Fair value of plan assets at 31 December	**116**	**109**

Major categories of plan assets as a percentage of the fair value of the total plan assets were as follows:

	2024	2023
Quoted in active markets:		
Equity instruments	33%	32%
Debt securities	43%	44%
Other	5%	5%
Unquoted investments:		
Debt securities	0%	0%
Real estate	12%	13%
Cash	5%	4%
Other	2%	2%

Remeasurements, including actuarial gains and losses arising from experience adjustments and changes in actuarial assumptions, recognised in the statement of comprehensive income were as follows:

(EUR million)	**2024**	2023
Accumulated balance at 1 January	**15**	**-14**
Remeasurements during the year	-8	29
Accumulated balance at 31 December	**7**	**15**

Remeasurements of the year originate from the following items:

(EUR million)	**2024**	2023
Remeasurements from actuarial (gains)/losses in DBO	-4	31
Exceeding return on plan assets (over net interest included in net liability)	-4	-2
Accumulated balance at 31 December	**-8**	**29**
Thereof:		
actuarial (gains)/losses from experience	-1	5
actuarial (gains)/losses from changes in actuarial assumptions	-3	26

State plans

Contributions to state plans amounted to EUR 32 million in 2024 (2023: EUR 26 million).

✪ Key estimates and assumptions

Pension obligations and pension entitlements that are known on the reporting date are valued using economic trend assumptions including, among others, salary growth rates and pension increase rates, which are intended to reflect realistic expectations, as well as variables specific to reporting dates such as discount rates. The principal assumptions used in determining the pension obligation were as follows:

	2024	2023
Discount rate	3.50%	3.45%
Future salary increases	2.50%	2.50%
Future pension increases	1.00%	1.00%

The vast majority of TenneT's pension plans include a fixed annual pension increase of 1% after retirement. For pension agreements that do not foresee this fixed increase, a future pension increase of 2.3% per year (2023: 2.3% per year) was used in the calculation of defined benefit obligations.

Assumptions regarding future mortality experience are set based on actuarial advice in accordance with published statistics and actuarial experience. An increase in each of the main assumptions would have had the followings effects:

(EUR million)	**2024**	2023
0.25% change of discount rate	-15	-14
0.5% change of salary increase rate	1	1
0.5% change of pension increase rate	1	1
Change of 1 year in life expectancy	8	8

The sensitivities indicated are computed based on the same methods and assumptions used to determine the present value of the defined benefit obligations and are based on variations in a single variable only. Note that the sensitivity analyses may not be representative of an actual change in the defined benefit obligation, as it is unlikely that changes in assumptions would occur in isolation.

Due to the development of plan assets and the change in (statutory) discount rates, TenneT expects to have no obligation to contribute to plan assets in 2025. TenneT expects the following, undiscounted, benefit payments from the plan:

(EUR million)	**2024**	2023
Within the next 12 months	8	7
Within 1-5 years	39	35
Within 5-10 years	62	57
More than 10 years	572	529
Total	**681**	**628**

ⓘ Accounting policies

For defined benefit plans, pension costs are determined using the projected unit credit method. Remeasurements, comprising of actuarial gains and losses, the effect of the asset ceiling (excluding net interest) and the return on plan assets (excluding net interest), are recognised in other comprehensive income in the period in which they occur. Remeasurements are not reclassified to the statement of income in subsequent periods.

Service costs comprising current service costs and, if applicable, past-service costs, gains and losses on curtailments and non-routine settlements are recognised as personnel expenses in the consolidated statement of income. Interest is calculated by applying the discount rate to the net defined benefit liability or asset and is recognised as part of the finance result in the statement of income.

Prepaid pension costs relating to defined benefit plans are capitalised only if they lead to refunds to the employer or to reductions in future contributions to the plan by the employer.

Pension plan the Netherlands

For the majority of the Dutch personnel TenneT has a multi-employer scheme offered by ABP Pension Fund ('ABP'). The pension contribution rate for 2024 was 19.5% (2023: 20.1%) of the pensionable salary. In 2025, TenneT expects to contribute EUR 52 million, based on 2024 number of employees, to the ABP scheme. Compared to the total participants in the ABP pension fund, TenneT's share in ABP is limited. The Company is not liable for any deficits in the multi-employer plan.

ABP has indicated that it is unable to provide the kind of company-specific information required by IFRS for defined-benefit pension schemes. Consequently, this scheme is treated as if it were a defined contribution scheme.

The policy funding ratio is the 12-month moving average of the nominal funding ratio. ABP's policy funding ratio at 31 December 2024 was 111.9% (2023: 113.9%) which is above the critical regulatory coverage rate level under which pensions would have to be reduced.

ⓘ Accounting policies

Payments to defined contribution plans are charged as an expense in the period to which they relate.

18. Other financial liabilities

The other financial liabilities consists of shares held by CIP in TOD3 for 67% in combination with a contribution from the Shareholder of EUR 1.6 billion in June 2023. The movement of is disclosed in the table hereafter:

(EUR million)	**2024**	2023
At 1 January	**1,771**	**185**
Profit share current year	9	21
Contribution by ordinary shareholder	-	1,602
Reclassification to equity	-1,602	-
Capital repaid	-8	-37
At 31 December	**170**	**1,771**

The contribution from the Shareholder was made under the condition that TenneT would distribute the same amount to the Shareholder when the shares in TenneT Germany are transferred for 100% to KfW. Given the conditions precedent, the contribution is reclassified to equity as the negotiations were terminated (refer also to note 1 and note 12).

The remaining short-term other financial liabilities of EUR 363 million (2023: EUR 373 million), which is not included in the movement schedule, relate mainly to collateral securities given by third parties to underwrite trading on energy exchanges and the auctioning of cross-border interconnection capacity as disclosed in note 10.

ⓘ **Accounting policies**

Please, refer to note 22 accounting policies for financial instruments.

19. Account- and other payables

(EUR million)	**2024**	2023
EEG accounts payable	466	1,741
Accounts payable	406	427
Accruals for tangible fixed assets	564	588
Grid expenses payable	2,016	1,948
Interest payable	220	148
Personnel payables	96	76
Wage tax and social securities payable	34	32
VAT payable	96	14
Payables to related parties	56	84
Other payables	474	114
Total	**4,428**	**5,172**

A list of all related parties is included in note 29 of the consolidated financial statements.

EEG accounts payable
Please, refer to note 9.

Accruals for tangible fixed assets
Payables in connection with tangible fixed assets purchases are related to unbilled services and deliveries for onshore and offshore investment projects.

Grid expenses payable
The grid expenses payable mainly consist of accrued expenses relating to balancing energy and capacity, congestion management (redispatch), grid losses and reactive power.

Interest payable
Interest payable increased because of higher outstanding borrowings in combination with an increase of the interest rates.

Personnel payables
Personnel payables mainly relate to accruals for paid leave and holiday allowance, which increased because of the increased workforce.

Other payables
Other payables mainly comprised accruals for which invoices had not yet been received. The amount of other payables increased mainly because of accruals for which invoices had not yet been received from construction suppliers in combination with an agreed upon settlement agreement with a supplier.

Key estimates and assumptions
Accrued grid expenses for measures taken to restore the imbalance of the electricity grid, relate to balancing services provided by various electricity generating parties. At year-end, TenneT records a pass-through accrual for all balancing costs. The accrual is based on actual volumes or, if not available, forecast volumes derived from models. Several assumptions are made in these models such as weather conditions, requested volumes and capacity power plant. Prices are based on underlying contracts and/or historical data.

Accounting policies
Please, refer to note 22 accounting policies for financial instruments.

20. Financial risk management
TenneT's business activities are exposed to a number of financial risks such as interest rate risk, credit risk, liquidity risk and refinancing risk, which are described in detail in this note. The financial risk management strategy primarily focuses on protecting liquidity, equity capital and net result in order to safeguard TenneT's ability to continue active operations while providing an adequate return to its shareholders. TenneT's approach to manage financial risks, including a number of specific disclosures (such as a maturity analysis of contractual undiscounted financial obligations) required by accounting standards, are set out in this note. For details about regulatory risks a reference is made to the 'risk management' section of the Integrated Annual report.

Risk management related to financing activities is done by TenneT's treasury department under policies included in the Treasury Statute approved by the Executive Board. Their objective is to facilitate the realisation of TenneT's financial and strategic objectives from a funding and financial risk perspective. The Treasury Statute includes principles covering specific areas such as interest rate risk, liquidity risk, the use of derivatives and the investment of excess liquidity. The use of all ordinary course financial instruments is permitted, provided these are used solely to cover open positions of the Company. Any speculative use of financial instruments is explicitly not authorised.

Interest rate risk

TenneT is exposed to interest rate risk on its debt portfolio. To limit this risk, the policy is to base the majority of the loan portfolio on fixed interest rates. As of 31 December 2024, the senior debt portfolio was for more than 99% (2023: 83%) based on fixed interest rates. An increase or decrease in interest rates of 2 percentage points would result in an increase or decrease of EUR 5 million in TenneT's interest cost (2023: EUR 70 million). The decrease of the exposure is mainly related to the shareholder loan facility compared to 31 December 2023.

Furthermore, there is a risk that interest payable on borrowings exceeds the interest compensation received by TenneT under the prevailing regulatory systems in the Netherlands and Germany. In 2022, a new regulatory period started in the Netherlands. The risk that the interest payable on borrowings exceeds the interest compensation received by TenneT is largely mitigated with the ex-post settlement of the interest rates which is part of the new regulatory period as of 2022.

In Germany, actual interest costs are compensated up to a level customary to the market. The BNetzA determines the market rate on basis of reference interest rates published by the Deutsche Bundesbank.

Currently TenneT expects that actual costs of debt for the Company are below the predefined maximum reference rates, in which case ACM has decided to ex-post settle the interest rate for interest rates actually measured in the applicable year of the regulatory period.

Credit risk

TenneT is exposed to the risk of loss resulting from counterparties' defaulting on their commitments including failure to pay or make a delivery on a contract. TenneT's exposure to credit risk from operating activities and treasury activities is inherent to its business activities.

Operational credit risk

In respect of TenneT's operating activities, TenneT has a credit policy in place, which takes into account the risk profiles of TenneT's counterparties. The Company also has policies in place to monitor the financial viability of counterparties.

In the Netherlands and Germany, TenneT is responsible for maintaining the balance between supply and demand of energy. The associated costs are covered by income from parties with balance responsibility, which are charged for any imbalances attributable to them. Any surplus is deducted from subsequent tariffs for system services.

For certain situations, securities in the form of bank guarantees and collaterals are held as protection against the default risk of parties with balance responsibility. With respect to investment projects, TenneT requires counterparties to deliver bank guarantees or collaterals as a protection against defaults.

The management of energy exchanges, the execution of the Renewable Energy Act in Germany and the maintenance of the energy balance between supply and demand requires transfer of significant cash amounts. TenneT's policies are aimed at minimising the risks associated with the clearing transactions in connection with these cash flows.

Credit risk on trade and other receivables is limited because most of TenneT's trade and other debtors have a low risk of default. Consequently, TenneT requires no material collateral as security and no insurance for credit risk. The maximum exposure to credit risk at the reporting date is the carrying value of each class of financial assets disclosed in note 7 and note 9. The movement of the allowance for expected credit losses ('ECLs') of trade receivables is disclosed in note 9.

The provision rates for ECLs are based on groupings of various customer segments with similar loss patterns (such as customer type and arrears in payments). Any ECLs for financial guarantee contracts and commitment letters, if any, are also provided for. The calculation reflects the probability-weighted outcome, the time value of money and reasonable and supportable information that is available at the reporting date about past events, current conditions and forecasts of future economic conditions. Generally, trade receivables and other financial assets are written-off if there is no reasonable expectation of recovering the contractual cash flows. The Group considers a financial asset in default when contractual payments are 90 days past due. However, in certain cases, TenneT may also consider a financial asset to be in default when internal or external information indicates that the Group is unlikely to receive the outstanding contractual amounts in full before taking into account any credit enhancements held by the Group.

Financial credit risk

In 2024, financial credit risk arose mainly from TenneT's transactions and positions with several financial institutions. At 31 December 2024, the maximum credit risk amounted to EUR 2.2 billion (2023: nil).

Counterparty risk may be defined as the risk that a party that has entered into a contract with the Group is unable to fulfil its financial obligations towards the Group. In accordance with TenneT's treasury policies, counterparty credit exposure is monitored frequently against the counterparty credit limits. Exposure per counterparty is calculated for the group as a whole, excluding the positions for EEG, KWK-G and ASK. TenneT has concentration limits in place for the Group EEG, KWK-G and ASK current account balances, when funds are placed on deposit and financial derivatives, money market loans and other products are entered into. At 31 December 2024, TenneT had EUR 2,050 million on deposits. These deposits had a maturity of less than 3 months (2023: nil), refer to note 10.

At 31 December 2024, TenneT had EUR 150 million deposits with third parties relating to EEG (2023: nil) and no financial derivatives were outstanding. At 31 December 2024, there were no deposits with a maturity of more than 3 months (2023: nil), refer to note 9 and note 17.

Management does not expect any significant losses from non-performance by treasury counterparties.

Liquidity risk

Liquidity risk is defined as the risk that the Group cannot meet its short-term financial obligations. Liquidity is monitored every quarter on a rolling 12-month forward-looking basis. TenneT's 12-month liquidity objective was met on 31 December 2024 and 31 December 2023.

The following maturity schedule presents TenneT's financial obligations on a contractual, non-discounted basis.

(EUR million)	Notes	<1 month	1 to 3 months	3 to 12 months	1 to 5 years	More than 5 years	**Total**
At 31 December 2024							
Account- and other payables	19	1,778	875	1,555	-	-	4,208
Other financial liabilities	18	364	-	-	-	170	534
Lease liabilities	4	22	41	188	801	359	1,411
Borrowings	14	111	3	1,258	9,331	29,873	40,576
Total		**2,275**	**919**	**3,001**	**10,132**	**30,402**	**46,729**

(EUR million)	Notes	<1 month	1 to 3 months	3 to 12 months	1 to 5 years	More than 5 years	**Total**
At 31 December 2023							
Account- and other payables	19	1,621	997	2,406	-	-	5,024
Other financial liabilities	18	373	-	1,602	-	171	2,146
Lease liabilities	4	18	32	159	578	299	1,086
Borrowings	14	1,611	1,918	491	6,658	15,626	26,304
Total		**3,623**	**2,947**	**4,658**	**7,236**	**16,096**	**34,560**

TenneT's borrowings have a diversified maturity profile, which reduces refinancing risks (refer to note 14).

The settlement of the EEG potentially has a significant impact on the Group's working capital position. Even though EEG expenses for payments to renewable energy producers are generally financed in full out of the federal budget, temporary liquidity risks may arise for the four German TSOs including TenneT, which may require interim financing to bridge liquidity gaps in the short-term. In principle, the German Federal Ministry of Finance and the Federal Ministry for Economic Affairs and Climate Action have confirmed in a letter that the financing of the EEG by the German state is secured.

At 12 January 2024, TenneT and the Dutch state have agreed upon a shareholder loan facility of EUR 25.0 billion to safeguard the financing of TenneT's planned investments in the Netherlands and Germany for 2024 and 2025. The loan facility relating to 2024, amounting to EUR 13.1 billion, is fully drawn. The undrawn facility for the year 2025 related to the current facility is EUR 11.9 billion. At 21 February 2025, TenneT and the Dutch state have agreed upon a supplementary shareholder loan facility of EUR 19.4 billion, safeguarding TenneT's planned investments in the Netherlands and Germany for 2025 and 2026. The supplementary shareholder loan facility for the years 2025 and 2026 amount to respectively EUR 2.3 billion and EUR 17.1 billion. The loans drawn from the facility will be granted at market conditions.

Next to shareholder loan facility, TenneT has EUR 3.3 billion committed RCFs at its disposal for general corporate purposes. At 31 December 2024, this facility was undrawn. Furthermore, TenneT had EUR 450 million of undrawn long-term loan commitments from the EIB available at 31 December 2024 and EUR 250 billion committed bilateral RCFs (nil drawn at 31 December 2024). Next to that, TenneT had EUR 500 million of uncommitted bank facilities (nil drawn at 31 December 2024) and EUR 450 million bank overdraft facilities (nil drawn at 31 December 2024).

The size of TenneT's credit facilities is such that the Company expects that all substantial adverse financial developments and events can reasonably be expected to be accommodated and that continuation of day-to-day operations is ensured for at least 12 months. The terms and conditions of TenneT's credit facilities include negative pledge and pari passu clauses. No security interest over any of the Group's assets has been provided. All credit facilities have floating-rate interest conditions.

TenneT also has access to diversified funding sources through its medium-term note (EMTN) programme and TenneT's commercial paper (CP) programme. Both programmes significantly reduce its dependency on bank financing.

TenneT expects to meet its financial obligations for 2025 with (i) Shareholder loan facilities, (ii) cash and cash equivalents, (iii) funds from operations, (iv) unused credit facilities, (v) capital market transactions and (vi) equity contributions from its Shareholder. TenneT expects to meet its financial obligations for the subsequent years through Shareholder loan facilities, various capital market transactions and equity contributions and intends to manage future refinancing risks by spreading the tenors of new financing arrangements.

Equity risk

Equity risk pertains to the risk of a lack of access to equity on a sustainable basis. This risk reflects the inability to raise additional capital in a timely fashion for TenneT's extensive investment portfolio or to absorb negative regulatory developments, possibly adversely affecting TenneT's financial position.

Actions taken in order to mitigate this risk are: (i) an active financing strategy to create and maintain an optimal capital structure as well as to diversify funding sources and manage financial risks, (ii) a proactive approach of potential investors and active discussion with the Shareholder to contribute additional equity and (iii) actively engaging in dialogue with its regulators to ensure that regulatory frameworks remain adequate to safeguard regulators income and returns to investors. Furthermore, the Company prepares tapping into public or private capital markets for a structural funding solution for its German operations.

Commodity price risk

TenneT's energy procurement risk management policy and delegations of authority govern its commodity trading activities for energy transactions. The purpose of this policy is to ensure TenneT transacts within pre-defined risk parameters and only in the physical and financial markets where TenneT or its customers have a physical market requirement. In addition, state regulators require TenneT to manage commodity risk and cost volatility prudently through diversified pricing strategies.

Energy purchase contracts for the forward purchase of electricity that are used to satisfy physical delivery requirements to customers, or for energy that the Group uses itself, meet the expected purchase or usage requirements of IFRS 9. They are, therefore, not recognised in the financial statements until they are realised. Disclosure of commitments under such contracts is made in note 23.

Energy purchase contracts are considered to comprise two components, being a forward purchase of power at spot prices, and a forward purchase of environmental certificates at a variable price (being the contract price less the spot power price). With respect to TenneT's current contracts, neither of these components meets the requirement to be accounted for as a derivative. As currently no liquid market for environmental certificates exists, this component meets the expected purchase or usage exemption of IFRS 9. TenneT expects to enter into an increasing number of these contracts, in order to meet its compliance requirements in the short to medium term. It is possible that in future, if and when liquid markets develop, and to the extent that TenneT is in receipt of environmental certificates in excess of its required levels, this exemption may cease to apply, and it may be required to account for forward purchase commitments for environmental certificates as derivatives at fair value through profit and loss.

21. Fair values

The next table provides an overview of the carrying value, based on the IFRS Accounting Standards, and fair value of financial instruments, including the level in the valuation hierarchy. Financial instruments are measured at fair value.

		Carrying amount		Fair value		
(EUR million)	Notes	**2024**	2023	**2024**	2023	Hierarchy
Financial assets						
Other financial assets:						
- Financial assets through profit and loss	7	13	15	13	15	Level 3
Total		**13**	**15**	**13**	**15**	
Financial liabilities						
Borrowings:						
- Borrowings - bonds	14	16,601	16,587	15,371	16,025	Level 1
- Borrowings - other	14	15,333	5,924	15,039	5,643	Level 2
Total		**31,934**	**22,511**	**30,410**	**21,668**	

At 31 December 2024, no financial instruments carried at fair value were held (2023: nil). Furthermore, TenneT concluded that the fair value of the loans and receivables, cash and cash equivalents, account- and other payables and other financial liabilities approximate their carrying amounts at year end 2024, due to the short-term maturities of these instruments.

The following hierarchy by valuation technique was used to calculate the fair value of assets and liabilities:

- Level 1: Measurement based on quoted prices (unadjusted) in active markets for identical assets or liabilities.
- Level 2: Measurement based on inputs other than quoted prices included in Level 1 that are observable for the asset or liability, either directly (that is, as prices) or indirectly (that is, derived from prices).
- Level 3: Measurement based on inputs for the asset or liability that are not based on observable market data (that is, unobservable inputs).

The fair value of the level 2 borrowings was based on discounted cash flows. A change in the assumptions used to calculate the fair value should not result in a significantly different outcome. There were no transfers between the fair value hierarchy levels during 2024 or 2023.

The fair value of the level 3 financial assets through profit and loss was based on information received by the investment funds.

22. ⓘ Accounting policies for financial instruments

Financial assets

All financial assets are recognised initially at fair value, net of directly attributable transaction cost.

After initial recognition financial assets are measured at amortised cost, fair value through other comprehensive income ('OCI') and fair value through profit or loss. Financial investments in investment funds (refer to note 7) are classified as fair value through profit or loss. All other of TenneT's financial assets are classified as amortised cost, because the following two conditions are met:

- The financial assets are held within a business model with the objective to hold financial assets in order to collect contractual cash flows; and
- The contractual terms of the financial asset give rise on specified dates to cash flows that are solely payments of principal and interest on the principal amount outstanding.

Financial assets at amortised cost are subsequently measured using the effective interest ('EIR') method and are subject to impairment.

The Group recognises an allowance for expected credit losses ('ECLs') for financial assets. ECLs are based on the difference between the contractual cash flows due in accordance with the contract and the cash flows that the Group expects to receive, discounted at an approximation of the original effective interest rate. For trade receivables and contract assets, the Group applies a simplified approach in calculating ECLs. Therefore, the Group does not track changes in credit risk, but instead recognises a loss allowance based on lifetime ECLs at each reporting date.

Financial liabilities

All financial liabilities are recognised initially at fair value and, in case of loans, borrowings and payables, net of directly attributable transaction costs. The Group's financial liabilities include trade and other payables, loans and borrowings including bank overdrafts.

After initial recognition at fair value, interest-bearing loans and borrowings are subsequently measured at amortised cost using the EIR method. Gains and losses are recognised in the statement of income when the liabilities are derecognised as well as through the EIR amortisation process. Amortised cost is calculated by taking into account any discount or premium on acquisition and fees or costs that are an integral part of the EIR. The EIR amortisation is included as finance expense in the statement of income.

23. Commitments and contingencies

Off-balance sheet rights and commitments existing per balance sheet date consist of the following:

(EUR million)	**2024**	2023
Investment related off-balance sheet items		
Off-balance sheet rights		
Bank guarantees received	4,689	3,746
Comfort letters received	3,212	2,180
Total	**7,901**	**5,926**
Off-balance sheet commitments		
Capital commitments	43,644	35,778
Comfort letters issued	790	813
Total	**44,434**	**36,591**
Other off-balance sheet items		
Off-balance sheet commitments		
Grid-related commitments	507	758
Other off-balance sheet commitments	127	55
Total	**634**	**813**

The expected cash flows in respect of capital commitments equal the amounts in the above table. For comfort letters issued, no cash flows are expected.

Bank guarantees received

The bank guarantees received are relates to ongoing investment projects.

Comfort letters received

The majority of comfort letters received was from parties involved in the construction of German onshore and offshore projects.

Capital commitments

Capital commitments are commitments entered into with regard to the purchase of tangible fixed assets. The capital commitments increased due to investments in TenneT's 2GW Program.

Approximately EUR 9.6 billion of capital commitments were payable within 12 months at 31 December 2024 (2023: EUR 5.3 billion).

Comfort letters issued

The comfort letters issued mainly related to offshore projects in Germany.

Grid related commitments

Grid-related commitments mainly consist of the outstanding value of purchase orders related to grid expenses to which TenneT is committed.

Other

Other off-balance sheet commitments mainly consist of:

- Compensation claimed by several parties for the delay or non-availability of the offshore grid connection. The related legal proceedings are still pending. If and to the extent the claims are (partly) justified and the payments resulting there-from could not be passed through via the grid tariffs, the binding rulings may have a negative impact on the financial position; and
- Capital commitments to minority participating interests.

For these items, it is not practically possible to determine the financial effect and possible timing of cash outflows and cash inflows.

Contingencies

Due to the business TenneT operates in, and TenneT's legal structure, TenneT faces several contingent liabilities. In general, the following items are disclosed as contingent liabilities at TenneT:

- Possible impact of the Dutch regulatory frameworks on the TenneT's business financial conditions and net income;
- Operational risks and risks related to material projects;
- Impact of environmental issues;
- Risks relating to the legal structure of TenneT;
- Risks relating to the financing of TenneT; and
- Factors which are material for the purpose of assessing market risks.

Financial risk management related to several of these contingencies is disclosed in note 21. Hereafter the contingencies regarding legal claims and environmental issues are further disclosed. Uncertainties relating to contingent liabilities make a reliable estimation of the financial impact impossible.

Various other off-balance sheet commitments and contingencies as well as other off-balance sheet rights existed as at 31 December 2024, but were immaterial from a disclosure perspective.

Legal contingencies

Legal claims mainly relate to project claims concerning assets under construction, for which the estimated additional payments would be capitalised. Generally, there are also claims relating to compensation for delays and interruptions, for which any compensation would be passed through future tariffs. If the recognition criteria for a provision are met, a provision for the legal claim is recognised. As a result of uncertainties, legal claims for which the recognition criteria of a provision are not met, could in unlikely events still result in outcomes with a material impact on TenneT's financial position.

Environmental contingencies

The Group is exposed to risks regarding environmental obligations arising from past activities. For example, a number of sites have to be decontaminated and restored to their original condition before being handed back at the end of the contractual period. Under current legislation, environmental plans and any other measures to be adopted have to be agreed with local, regional and national authorities as appropriate. As soon as such plans are approved or other legal obligations arise, a provision is formed based on the most reliable estimate possible of future expenses. TenneT is of the opinion that the currently recognised provisions are adequate, based on information currently available.

ⓘ Accounting policies

Contingent assets are disclosed where an inflow of economic benefits is probable. As soon as it has become virtually certain that an inflow of economic benefits will arise, the asset and the related income are recognised in the financial statements of the period in which the change occurs.

Where an obligation does not meet the recognition requirements for provisions, a contingent liability is disclosed unless the possibility of an outflow of resources embodying economic benefits is remote. When it becomes probable that an outflow of future economic benefits will be required, a provision is recognised in the financial statements of the period in which the change in probability occurs, except in the extremely rare circumstances where no reliable estimate can be made. If the Company is jointly and severally liable for an obligation, the part of the obligation that is expected to be met by other parties is treated as a contingent liability.

24. Revenue

	2024					
(EUR million)	TSO NL	TSO Germany	Non-regulated	**Total segments**	Eliminations	**Total**
Connection and transmission services	2,696	4,207	-	6,903	-	6,903
Maintenance of the energy balance	336	362	-	698	-	698
Operation of energy exchanges	188	400	-	588	-	588
Offshore (balancing)	255	1,354	-	1,609	-	1,609
Other	19	131	40	190	-	190
Revenue to related parties	5	2	4	11	-	11
Inter-segment	50	22	5	77	-77	-
Total IFRS revenue	**3,549**	**6,478**	**49**	**10,076**	**-77**	**9,999**

	2023					
(EUR million)	TSO NL	TSO Germany	Non-regulated	**Total segments**	Eliminations	**Total**
Connection and transmission services	1,344	4,524	-	5,868	-	5,868
Maintenance of the energy balance	261	432	-	693	-	693
Operation of energy exchanges	275	475	-	750	-	750
Offshore (balancing)	345	1,473	-	1,818	-	1,818
Other	21	95	44	160	-	160
Revenue to related parties	3	2	4	9	-	9
Inter-segment	53	24	5	82	-82	-
Total IFRS revenue	**2,302**	**7,025**	**53**	**9,380**	**-82**	**9,298**

A list of all related parties is included in note 29 of the consolidated financial statements.

Connection and transmission services

Revenue from connection and transmission services is regulated by the ACM in the Netherlands and by the BNetzA in Germany and mainly relates to transmission of electricity volumes through the high-voltage grid and to connection services provided to distribution system operations ('DSOs') and industrial customers, i.e. resolution of transmission restrictions, congestion management and reactive power management. The increase in the revenue is mainly explained by the higher regulatory asset base, as a result of our growing investments, resulting in higher revenue in Germany and the Netherlands in combination with higher grid fee tariffs that included the reimbursement of the higher ancillary services costs of earlier years in the Netherlands. The latter is however partly offset by lower regulatory rates for the return on equity and includes lower reimbursement compared to 2023 due to decreasing expected costs for ancillary services in Germany. Furthermore, revenue decreased in Germany compared to 2023, due to an adjustment of EUR 535 million as a result of reassessed estimation assumptions for accruals regarding ancillary services, refer to note 1 for more information.

Maintenance of the energy balance

TenneT is responsible to ensure that electricity supply and demand is in balance at all times (i.e. alternating current frequency in the power grid must be at 50 Hz continuously). If this balance is significantly disrupted, this may result in a power outage or even a black-out, depending on the length and severity of the imbalance. To ensure this balance, TenneT contracts and deploys (amongst others) reserve and emergency capacity to compensate unexpected fluctuations in supply and demand with balancing energy. The associated costs are covered by income from parties with balancing responsibility, which are charged for any imbalances attributable to them. Likewise, balancing responsible parties that solve imbalances are compensated. The cash in- and outflows associated from maintaining this energy balance (e.g. imbalance settlements) fluctuate considerably and are refunded through tariffs of transmission services in subsequent years.

Operation of energy exchanges

This revenue stream is resulting from the auctioning of the available electricity transmission capacity on cross-border interconnections, which is facilitated through a singe trading platform of a related party. The decrease in 2024 compared to 2023 is mainly due to lower auction prices. The auction prices were higher in 2023 due to larger uncertainties on the energy market.

Offshore (balancing)

Offshore revenue is also regulated by the ACM. The offshore revenue is a government subsidy obtained from the ministry of Climate Policy and Green Growth, which is based on the revenue decision of the ACM. Offshore revenue decreased mainly because of lower compensation for redispatch expenses on offshore connections and due to several post-calculations, that were settled in the 2024 subsidy, in combination with current year expenses that would be compensated through post-calculation in the offshore subsidy being shifted to regular settlement in future tariffs because of the capped subsidies from 2025 onwards, partly offset by an increase of the offshore asset base and capitalised assets that generate revenue for the entire year since 2024, compared to 2023.

ⓘ Accounting policies

Revenue primarily represents the sales value derived from the connection and transmission of electricity together with the sales value derived from the provision of other services to customers during the year. Revenue from contracts with customers is recognised when control of the goods or services is transferred to the customer at an amount that reflects the consideration to which the Group expects to be entitled in exchange for those goods or services. Revenue arises from contracts with a single performance obligation.

If the revenue received or the receivable exceeds the maximum annual amount as determined by the national regulators, ACM or BNetzA respectively, a downward adjustment will be made to future tariffs to reflect this over-recovery. Under IFRS Accounting Standards, no liability is recognised for settlement in future tariffs since this adjustment relates to the performance of future services. Similarly, no asset is recognised under IFRS Accounting Standards when a regulator permits upward adjustments to be made to future tariffs in respect of under-recovery. In underlying accounting as opposed to IFRS Accounting Standards, the amounts to be settled in future tariffs are accounted for, please refer to note 2 for further details.

Offshore revenue is reimbursed through tariffs and partially through a subsidy. Offshore revenue received through subsidy is accounted for in accordance with the recognition and measurement principles of IAS 20 related to government grants. Revenue is not recognised until there is reasonable assurance that the Group satisfies the conditions for receiving the subsidy.

25. Operating expenses

Grid expenses

(EUR million)	**2024**	2023
System services	2,266	3,158
Connection and transmission services	1,176	1,342
Maintenance of the energy balance	457	522
Other ancillary services	-1	44
Total ancillary services	**3,898**	**5,066**
Maintaining and operating transmission grids	666	901
Total	**4,564**	**5,967**

Ancillary services are the costs TenneT must incur to maintain the energy balance in the high-voltage grid with balancing energy, balancing capacity and reactive power and to compensate for grid losses and grid congestion (redispatch costs). As ancillary services require TenneT to procure electricity, these cost are directly affected by electricity market prices. Following mild weather, societal savings of fossil fuels, a diversification of gas supplies including LNG to Europe, and increased solar and wind output energy prices dropped significantly and the energy markets became less volatile in 2023, which continued in 2024. As such, TenneT's ancillary services costs decreased from EUR 5,066 million in 2023, to EUR 3,898 million in 2024. The grid expenses will largely be reimbursed through future tariffs as pass-through costs, which means that the decreased grid expenses will therefore result in lower grid tariffs in future years.

In 2024, an amount of EUR 206 million (2023: EUR 109 million) concerns transactions with related parties. A list of all related parties is included in note 29 of the consolidated financial statements.

Personnel expenses

(EUR million)	**2024**	2023
Salaries	698	576
Social security contributions	100	81
Pension charges defined benefit plans	15	11
Pension charges other plans	45	35
Other personnel expenses	61	53
Capitalised costs for (in)tangible fixed assets	-566	-421
Total	**353**	**335**

	2024	2023
Average internal workforce in FTEs employed in the Netherlands	3,103	2,652
Average internal workforce in FTEs employed in Germany	4,391	3,625
Average internal workforce in FTEs	**7,494**	**6,277**

Of the total number of employees, around 3,085 (2023: 2,636) work in the Netherlands. Personnel expenses increased mainly due to increasing FTEs. Furthermore, salaries have increased due to individual salary increases.

Key management remuneration

Members of the Executive Board and Supervisory Board are regarded as key management.

Aggregate remuneration of members of the Executive Board and Supervisory Board is as follows:

Remuneration Executive Board

(EUR thousand)	**2024**	2023
Fixed remuneration	1,827	1,753
Pension cost	302	274
Total	**2,129**	**2,027**

Remuneration Supervisory Board

(EUR thousand)	**2024**	2023
Fixed remuneration	181	155
Committee fee	83	80
Total	**264**	**235**

The entire Executive Board consists of statutory directors. Pension remuneration equals (i) the contributions payable to the defined contribution plan for service rendered in the period or (ii), for defined benefit plans, the current service cost and, when applicable, past service cost. Please, refer to the Supervisory Board Report for a more detailed disclosure on remuneration.

Other operating expenses

(EUR million)	**2024**	2023
Accommodation and office expenses	166	136
Consultancy expenses	85	74
Hiring of temporary personnel	214	211
Travel and living expenses	53	43
Other expenses	111	88
Capitalised costs for (in)tangible fixed assets	-180	-175
Total	**449**	**377**

Other operating expenses mainly increased due increased number of office locations and increased FTEs which lead to higher travel expenses and higher expenses for IT. Furthermore, consultancy expenses increased, due to possible sale of TenneT Germany.

Auditors' remuneration

The fees listed in the table hereafter relate to the services provided to the Company and its consolidated Group entity by Deloitte Accountants B.V., the Netherlands, the external auditor as referred to in section 1(1) of the Dutch Accounting Firm Oversight Act (Dutch acronym: Wta), as well as by other Dutch and non-Dutch Deloitte legal entities, including their tax services and advisory groups.

(EUR thousand)	**2024**	2023
Audit of the financial statements		
Deloitte Accountants B.V.	1,437	836
Deloitte GmbH Wirtschaftsprüfungsgesellschaft	1,088	750
Total audit of the financial statements	**2,525**	**1,586**
Other assurance services		
Deloitte Accountants B.V.	681	337
Deloitte GmbH Wirtschaftsprüfungsgesellschaft	368	409
Total other assurance services	**1,049**	**746**
Total audit fees	**3,574**	**2,332**

The fees for the audit of the financial statements include the audit fees related to (i) TenneT's Integrated Annual Report, (ii) any statutory financial statements of subsidiaries and (iii) services that are normally provided by the auditor in connection with their audit mandate.

The other assurance fees include the aggregate fees invoiced for assurance and services for other audit services, which generally only the Company's independent auditor can reasonably provide, such as comfort letters, regulatory statements and audits of grant statements.

ⓘ Accounting policies

TenneT has energy purchase contracts for the forward purchase of electricity that are used to fulfil performance obligations to customers, or for energy that the Group uses itself. Substantially all TenneT's costs of purchasing electricity for supply to customers are recoverable at an amount equal to cost (pass-through in the tariffs for subsequent years). The timing of recovery of these costs can vary between financial periods leading to an under- or over-recovery within any particular year that can lead to large fluctuations in the IFRS statement of income. TenneT follows approved policies to manage price and supply risks for TenneT's commodity activities.

The aforementioned energy purchase contracts for the forward purchase of electricity meet the expected purchase or usage requirements of IFRS 9. These energy purchases are, therefore, not recognised in the financial statements until these are realised. Disclosure of commitments under such contracts have been disclosed as 'Grid related commitments' in note 23.

Operating expenses are expenses incurred during regular day-to-day business, such as personnel expenses, depreciation or costs for connection and transmission services, system services, maintenance of the energy balance, maintaining and operating transmission grids, accommodation or travel. Operating expenses are recognised in the statement of income in the period these costs are incurred. Payments to defined contribution pension plans are also charged as an expense in the period to which these payments relate.

26. Finance income and expenses

Finance income

The finance income mainly relates to interest on bank accounts. In 2024, the received finance income has increased compared to 2023, due to a, on average, higher cash balance in combination with increased interest rates.

Finance expense

(EUR million)	**2024**	2023
Interest on borrowings and credit facilities	607	394
Capitalised interest on assets under construction	-39	-25
Interest on provisions	49	32
Interest on lease liability	37	18
Interest on financial liability	9	21
Interest on defined benefit obligation	7	6
Other finance expenses	69	49
Total	**739**	**495**

Finance expenses comprise mainly interest expenses, such as interest and fees on borrowings and credit facilities, interest on provisions and interest on lease liabilities. Finance expenses increased, mainly because of the withdrawals from the shareholder loan facility, refer to note 14, in combination with increased interest rates. The interest on financial liability concerns a transaction with a related party.

For the effective rates of interest on assets under construction, lease liabilities, borrowings and provisions, please refer to note 3, 4, 14 and 16 respectively.

ⓘ Accounting policies

Finance expenses are recorded in the statement of income using the effective interest rate method.

27. Corporate income tax

TenneT strives to comply with all applicable tax legislation in a socially responsible manner, maintaining among the highest levels of transparency, quality and integrity.

Corporate income tax is payable in the Netherlands and Germany. In the Netherlands, TenneT has the so called 'horizontal monitoring agreement' with the Dutch tax authorities. Based on transparency and mutual trust, this agreement is meant to ensure that tax positions are fully disclosed and agreed on in advance. Therefore, generally no tax audits are performed by the Dutch tax authorities.

The corporate income tax returns in the Netherlands have been filed up to and including 2022. Corporate income tax paid in the Netherlands in 2024 amounted to EUR 145 million (2023: EUR 74 million). In Germany, corporate income and trade tax returns for all German entities have been filed up to and including 2023. In 2024, TenneT paid EUR 174 million (2023: EUR 66 million) of corporate income and trade tax in Germany.

The key components of the corporate income tax expense are:

(EUR million)	**2024**	2023
Current income tax charge	376	399
Deferred tax	325	-139
Income tax expense reported in the statement of income	**701**	**260**

Corporate income tax on results has been applied at the rates prevailing in the respective countries. In the Netherlands, a statutory corporate income tax rate of 25.8% was applied, while in Germany, on average, a marginal statutory corporate income tax rate of 30.2% was applied (including trade tax levied by municipalities or 'Gewerbesteuer').

As the corporate income tax calculation is based on underlying results, the differences between underlying financial information and IFRS figures, as already disclosed in note 2, also result in a net deferred tax asset and a deferred tax expense. The majority of the deferred tax position and the deferred tax expense are therefore related to (variances in) amounts to be settled in tariffs (including proceeds from maintenance of the energy balance), auction receipts, investment contributions and depreciation differences. Also some other minor differences between IFRS Accounting Standards and fiscal valuation exist in the tangible fixed assets and provisions. The deferred tax position and deferred tax expense are further specified hereafter.

Reconciliation between the corporate income tax expense and the result before income tax multiplied by the Dutch statutory corporate income tax rate of 25.8% is as follows:

(EUR million)	**2024**	2023
Result before tax	**2,528**	**971**
Statutory corporate income tax expenses	652	251
Effect of higher corporate income tax rate in Germany	46	43
Adjustment in respect to current and deferred tax of previous years	-	-3
Non-deductible costs	15	8
Non taxable income	-10	-35
Tax paid by third parties	-2	-4
Effective corporate income tax expenses	**701**	**260**

The main reason for the higher effective tax rate of 27.7% compared to the Dutch statutory rate is mainly the effect of the higher statutory tax rate for the German operations.

Deferred tax is recognised in the statement of financial position as follows:

	Statement of financial position	
(EUR million)	**2024**	2023
Auction receipts	-154	-97
Investment contributions	-64	-67
Tariffs to be settled	318	553
Accelerated depreciation for tax purposes	-245	-230
Provisions	374	357
Result allocation to hybrid securities	-10	-6
Receivable/payable	297	342
Other	2	-3
Net deferred tax assets/(liabilities)	**518**	**849**

	Statement of income	
(EUR million)	**2024**	2023
Auction receipts	57	57
Investment contributions	-3	-2
Tariffs to be settled	235	-226
Accelerated depreciation for tax purposes	15	121
Provisions	-19	-86
Receivable/payable	45	1
Other	-5	-4
Deferred tax expense/(income)	**325**	**-139**

Deferred taxes are presented in the statement of financial position as follows:

(EUR million)	**2024**	2023
Deferred tax assets	521	852
Deferred tax liabilities	-3	-3
Deferred tax, net	**518**	**849**

Movements in the deferred tax position are disclosed hereafter:

(EUR million)	**2024**	2023
At 1 January	**849**	**699**
Income tax during the period recognised in statement of income	-325	139
Transfer to current tax payable	-20	-15
Deconsolidation	-	2
Income tax during the period recognised in equity	16	15
Income tax during the period recognised in other comprehensive income	-2	9
At 31 December	**518**	**849**

Unrecognised deferred tax assets are reassessed at each reporting date and are recognised to the extent that it has become probable that future taxable profits will allow the deferred tax asset to be recovered. There are no unrecognised carry-forward losses per 31 December 2024 (2023: nil).

Pillar Two legislation

The Group has applied the temporary exception as issued by the International Accounting Standards Board ('IASB') from the accounting requirements for deferred taxes in IAS 12. Accordingly, the Group neither recognises nor discloses information about deferred tax assets and liabilities related to Pillar Two income taxes.

In the Netherlands, the Pillar Two legislation is enacted and is effective as of 2024 and will be applicable to the TenneT Group. Accordingly, the Pillar Two legislation has been fully integrated into this years tax reporting and TenneT has comprehensively reviewed the Pillar Two requirements to ensure all tax obligations are properly met. TenneT is mainly operating in the Netherlands and Germany. In both jurisdictions TenneT will apply a (transitional) safe harbour approach with regard to Pillar Two compliance and as a result a top-up tax will not be applicable.

ⓘ Accounting policies

The corporate income tax charge for the period is recognised in the statement of income, equity or the statement of comprehensive income, in accordance with the relevant accounting treatment of the related transaction. The corporate income tax charge comprises both current and deferred tax.

Current income tax assets and liabilities are measured at the amount expected to be recovered from, or paid to, the tax authorities. The tax rates and tax laws used to calculate these amounts are those enacted or substantively enacted at the reporting date in those countries where TenneT operates and where it generates taxable income.

Deferred tax is recognised using the liability method with respect to temporary differences between the tax bases of assets and liabilities and their respective carrying amounts for financial reporting purposes at the reporting date. Deferred tax assets and liabilities are measured at the tax rates that are expected to apply in the year when the asset is realised or the liability is settled, based on tax rates (and tax laws) that have been enacted or substantively enacted at the reporting date in the relevant jurisdictions.

Deferred tax is generally recognised in respect of all temporary differences, the carry-forward of unused tax credits and any unused tax losses. Deferred tax assets (also in association with investments in subsidiaries, associates and interests in joint arrangements) are recognised to the extent that it is probable that taxable result will be available against which the deductible temporary differences and the carry-forward of unused tax credits and unused tax losses can be utilised. This assessment is performed annually.

Deferred tax is not recognised for the temporary differences arising from the initial recognition of goodwill or an asset or liability in a transaction that is not a business combination and, at the time of the transaction, affects neither the accounting profit nor taxable profit or loss.

Deferred tax assets and liabilities are recognised on a gross basis in the statement of financial position unless:

- The entity has a legally enforceable right to set off current tax assets against current tax liabilities; and
- The deferred tax assets and the deferred tax liabilities relate to income taxes levied by the same taxation authority on either:
  - The same taxable entity; or
  - Different taxable entities which intend either to settle current tax liabilities and assets on a net basis, or to realise the assets and settle the liabilities simultaneously, in each future period in which significant amounts of deferred tax liabilities or assets are expected to be settled or recovered.

28. Earnings per share

Earnings per share were calculated by dividing results for the year attributable to ordinary shareholder of the Group, after adjustment for the distribution on hybrid securities, by the weighted average number of ordinary shares outstanding during the year. The following table reflects the income and share data used for the basic and diluted earnings per share calculations.

(EUR million)	**2024**	2023
Result attributable to ordinary equity holders of the parent	1,822	652
Allocation to hybrid securities	-78	-57
Result for the year attributable to equity holders of the company adjusted for the allocation to hybrid securities	**1,744**	**595**
Weighted average number of ordinary shares in issue (in thousands)	200	200

ⓘ Accounting policies

Calculation of earnings per share is based on the result for the year attributable to TenneT's sole shareholder and the weighted average number of shares outstanding during the year.

29. Related parties

An overview of legal entities included in the consolidated financial statements is included in note 30. In addition, the following related parties are identified at the Company level within the Group:

- The Shareholder, state of the Netherlands: TenneT Holding B.V. is controlled by the Dutch state, which owns 100% of the Company's ordinary shares (note 12);
- Joint ventures and associates (note 6);
- Members of the Executive Board and Supervisory Board of TenneT Holding B.V. (note 25).

ⓘ Accounting policies

TenneT has identified its shareholder, its key management personnel and its joint ventures and associates as related parties. Key management personnel are those persons having authority and responsibility for planning, directing and controlling the activities of the entity, directly or indirectly, as defined by IAS 24 'Related Parties'. The transactions with the key management personnel are split in the total fixed remuneration and the pension cost. There are no (long-term) incentive schemes.

30. Consolidated subsidiaries

The following legal entities are included in the consolidation of TenneT Holding B.V.:

			Voting interest		Economic interest	
Subsidiary	**Legal seat**	**Country**	**2024**	2023	**2024**	2023
Direct subsidiaries						
NLink International B.V.[1]	Arnhem	Netherlands	100%	100%	100%	100%
Relined B.V.	Utrecht	Netherlands	100%	100%	100%	100%
TenneT Duitsland Coöperatief U.A.[1]	Arnhem	Netherlands	100%	100%	100%	100%
TenneT Green B.V.[1]	Arnhem	Netherlands	100%	100%	100%	100%
TenneT Orange B.V.	Arnhem	Netherlands	100%	100%	100%	100%
TenneT Reinsurance N.V.	Arnhem	Netherlands	100%	100%	100%	100%
TenneT TSO B.V.	Arnhem	Netherlands	100%	100%	100%	100%
TenneT TSO Duitsland B.V.[1]	Arnhem	Netherlands	100%	100%	100%	100%
NOVEC B.V.	The Hague	Netherlands	100%	100%	100%	100%
Indirect subsidiaries						
B.V. Transportnet Zuid-Holland[1]	Voorburg	Netherlands	100%	100%	100%	100%
Duvekot Rentmeesters B.V.	Bathmen	Netherlands	100%	100%	100%	100%
Nadine Netwerk B.V.[1]	Arnhem	Netherlands	100%	100%	100%	100%
Nederlands-Duitse Internet Exchange B.V.	Enschede	Netherlands	100%	100%	100%	100%
Saranne B.V.[1]	Arnhem	Netherlands	100%	100%	100%	100%
Stichting Beheer Doelgelden Landelijk Hoogspanningsnet	Arnhem	Netherlands	N/A	N/A	N/A	N/A
Relined GmbH	Emsbüren	Germany	100%	100%	100%	100%
Indirect subsidiaries continued						
TransTenneT B.V.	Arnhem	Netherlands	100%	100%	100%	100%
Omroepmasten B.V.	Vianen	Netherlands	100%	100%	100%	100%
DC Netz DolWin4 GmbH	Bayreuth	Germany	100%	100%	100%	100%
DC Netz HelWin1 GmbH	Bayreuth	Germany	100%	100%	100%	100%
DC Netz SylWin2 GmbH	Bayreuth	Germany	100%	100%	100%	100%
Greennet Stiftung	Bayreuth	Germany	N/A	N/A	N/A	N/A
TenneT GmbH & Co. KG[2]	Bayreuth	Germany	100%	100%	100%	100%
TenneT Offshore 1. Beteiligungsgesellschaft mbH	Bayreuth	Germany	51%	51%	31%	31%
TenneT Offshore 2. Beteiligungsgesellschaft mbH	Bayreuth	Germany	51%	51%	31%	31%
TenneT Offshore 8. Beteiligungsgesellschaft mbH	Bayreuth	Germany	51%	51%	37%	37%
TenneT Offshore 9. Beteiligungsgesellschaft mbH	Bayreuth	Germany	51%	51%	37%	37%
TenneT Offshore Dolwin3 Beteiligungs GmbH & Co. KG[2]	Bayreuth	Germany	51%	51%	30%	30%
TenneT Offshore Dolwin3 GmbH & Co. KG	Bayreuth	Germany	51%	51%	30%	30%
TenneT Offshore Dolwin3 Verwaltungs GmbH	Bayreuth	Germany	51%	51%	33%	33%
TenneT Offshore GmbH	Bayreuth	Germany	100%	100%	100%	100%
TenneT TSO GmbH	Bayreuth	Germany	100%	100%	100%	100%
TenneT Verwaltungs GmbH	Bayreuth	Germany	100%	100%	100%	100%

1 For these companies TenneT has issued a declaration of liability as referred to in Part 9 of Book 2 of the Dutch Civil Code, article 403.

2 These companies, which has been consolidated in these financial statements, has opted for the exemption of Section 264b of the German Commercial Code.

As TenneT is able to exercise direct control over its management and financial and operational policies, Stichting Beheer Doelgelden Landelijk Hoogspanningsnet, a foundation which temporarily manages funds arising from the maintenance of the energy balance and auctioning of cross-border capacity by TenneT TSO B.V., is included in the consolidation. The same applies to Greennet Stiftung which is a foundation that compensate negative impact due to construction work of TenneT in its German grid.

31. Events after the reporting period

At 21 February 2025, TenneT and the Dutch state have made arrangements regarding a supplementary shareholder loan facility of EUR 19.4 billion, safeguarding our planned investments in the Netherlands and Germany for 2025 and 2026. The loan facility will be granted at market conditions.

TenneT Holding B.V. sold the in-scope assets and liabilities of its subsidiary NOVEC B.V., and its indirect stake in Open Tower Company B.V., per February 2025 for a cash consideration of EUR 145 million. Further reference is made to note 1 of the consolidated financial statements.

Company financial statements

The balance sheet is prepared on a basis before result appropriation

Company statement of financial position

For the year ended 31 December

(EUR million)	Notes	**2024**	2023
Assets			
Non-current assets			
Investments in subsidiaries	33	12,271	10,661
Investments in associates	34	31	31
Other financial assets	35	28,472	22,299
Total non-current assets		**40,774**	**32,991**
Current assets			
Other financial assets	35	348	317
Account- and other receivables	36	7	5
Cash and cash equivalents		3,531	295
Total current assets		**3,886**	**617**
Total assets		**44,660**	**33,608**

(EUR million)	Notes	**2024**	2023
Equity and liabilities			
Equity			
Paid up and called-up capital		100	100
Share premium		4,622	3,020
Legal reserves		751	759
Retained earnings		1,510	1,042
Unappropriated result		1,744	595
Equity attributable to ordinary shares		**8,727**	**5,516**
Hybrid securities		2,140	2,125
Equity attributable to owners of the company	37	**10,867**	**7,641**
Non-current liabilities			
Borrowings	14	31,366	18,871
Deferred tax liabilities		10	6
Total non-current liabilities		**31,376**	**18,877**
Current liabilities			
Borrowings	14	568	3,640
Financial liabilities	38	-	1,602
Account- and other payables	39	1,849	1,848
Total current liabilities		**2,417**	**7,090**
Total equity and liabilities		**44,660**	**33,608**

Company statement of income

For the year ended 31 December

(EUR million)	Notes	**2024**	2023
Revenue		**-**	**-**
Other operating expenses	41	-10	-23
Other gains/(losses)		-	-
Total operating expenses		**-10**	**-23**
Share in profit of joint ventures and associates		5	4
Operating result		**-5**	**-19**
Finance income	42	725	436
Finance expenses	43	-692	-456
Finance result		**33**	**-20**
Result before income tax		**28**	**-39**
Income tax expenses		-20	-3
Result from subsidiaries	33	1,814	694
Result for the year		**1,822**	**652**

Notes to the company financial statements

These notes contain information about the company financial statements of TenneT Holding B.V. Details related to TenneT Holding B.V.'s financial results and position are provided, as well as a description of the specific accounting policies applied when compiling these company financial statements.

32. Company accounting policies

The company financial statements for TenneT Holding B.V. have been prepared in accordance with the provisions of Part 9 of Book 2 of the Dutch Civil Code. The same principles governing valuation and the determination of results (including the principles governing the classification of financial instruments as equity or liability) have been applied when compiling the company financial statements and the consolidated financial statements, as permitted by as permitted by Article 362 clause 8 of Part 9 of Book 2 of the Dutch Civil Code.

33. Investments in subsidiaries

Investments in subsidiaries relate to the legal entities included in the consolidation as disclosed in note 30 of the consolidated financial statements.

The movement in investments in subsidiaries can be specified as follows:

(EUR million)	**2024**	2023
At 1 January	**10,661**	**8,491**
Share in result	1,814	694
Capital contributions	56	1,602
Capital repayments	-49	-42
Dividends received	-217	-64
Remeasurement of defined benefit pension plans	6	-20
At 31 December	**12,271**	**10,661**

Accounting policies

Investments in subsidiaries are measured at net asset value. The net asset value of a participating interest is determined by valuing assets, provisions and liabilities and calculating the result using the accounting principles applied to the consolidated financial statements.

When TenneT's share of losses in an investment equals or exceeds its interest on investment, (including separately presented goodwill or any other unsecured non-current receivables, as part of the net investment), it does not recognise any further losses, unless it has incurred legal or constructive obligations or made payments on behalf of this investment. In such case, TenneT will recognise a provision.

34. Investments in associates

The investment in associates is related to HGRT. In 2024, TenneT's share in HGRT's result amounted to EUR 5 million (2023: EUR 4 million) and EUR 5 million (2023: EUR 4 million) dividends were received. Further reference is made to note 6 of the consolidated financial statements.

35. Other financial assets

In relation to (i) fees for credit facilities available and (ii) financial assets through profit and loss reference is made to note 7 of the consolidated financial statements. The remaining portion of the other financial assets relate to receivables from subsidiaries. These receivables relate to inter-company loans and cash management activities of TenneT Holding B.V. The agreed interest rate for the inter-company loans is its cost of fund rate plus 0.125%. These receivables are unsecured. The movements relating to the non-current other financial assets are as follows:

(EUR million)	**2024**	2023
At 1 January	**22,299**	**17,412**
Additions	7,899	6,432
Capital contributions to minority participating interests	-	2
Repayments	-1,574	-1,338
Transfer to current	-151	-207
Fair value adjustment equity investments	-1	-2
At 31 December	**28,472**	**22,299**

TenneT Holding B.V. had EUR 338 million (2023: EUR 312 million) of current other financial assets which were related to receivables from subsidiaries. The remaining current other financial assets relate to fees for credit facilities.

36. Account- and other receivables

Account- and other receivables relate to interests to be received in deposits amounting to EUR 7 million (2023: nil). Last year, the account- and other receivables relate to a corporate income tax receivable.

37. Equity

Please refer to the consolidated statement of changes in equity and note 12 in the consolidated financial statements for further disclosure regarding the components of the equity, including the hybrid securities, except for the legal reserves that are required to be recognised at company level, which are disclosed hereafter. In the consolidated financial statements, the reserve for internally generated assets, the revaluation reserve and the reserve for participating interests are included in retained earnings.

(EUR million)	Reserve participating interests	Reserve for internally generated assets	Revaluation reserve	**Total legal reserves**
At 1 January 2023	**665**	**111**	**1**	**777**
Result from joint ventures and associates	145	-	-	**145**
Dividends from joint ventures and associates	-148	-	-	**-148**
Capital repayments from joint ventures and associates	-34	-	-	**-34**
Internally generated intangible assets	-	39	-	**39**
Amortisation on internally generated intangible assets	-	-19	-	**-19**
Depreciation revaluation tangible fixed assets	-	-	-1	**-1**
At 31 December 2023	**628**	**131**	**-**	**759**
Result from joint ventures and associates	48	-	-	**48**
Dividends from joint ventures and associates	-38	-	-	**-38**
Capital repayments from joint ventures and associates	-35	-	-	**-35**
Internally generated intangible assets	-	63	-	**63**
Amortisation on internally generated intangible assets	-	-46	-	**-46**
At 31 December 2024	**603**	**148**	**-**	**751**

The legal reserves are not freely distributable.

Reserve participating interests

The reserve for participating interests relates to joint ventures and associates, for which TenneT does not control payment of dividends.

Reserve for internally generated assets

The reserve for internally generated assets relates to internally developed software by TenneT's own workforce. During 2024, EUR 63 million (2023: EUR 39 million) of software was internally developed. The legal reserve for internally generated assets is amortised over the related assets useful life. For more details on the intangible assets please refer to note 5.

Appropriation of result for the year ended 31 December 2024

The financial statements of 2023 were approved in the General Meeting held on 7 March 2024. The General Meeting determined the appropriation of result in accordance with the proposal being made to that end. The appropriation of the 2024 result is at the free disposal of the General Meeting of Shareholders and has not been recorded in the financial statements.

38. Financial liabilities

The contribution received from the Shareholder for an amount of EUR 1.6 billion last year has been reclassified from current financial liability to equity as the shares in TenneT Germany will not be transferred for 100% to KfW. The latter was a condition for distribution of the EUR 1.6 billion to the Shareholder and that condition is not met as the negotiations were terminated (refer also to note 1).

39. Account- and other payables

(EUR million)	**2024**	2023
Payables to subsidiaries	1,532	1,627
Interest payable	221	148
Income tax payable	88	70
Other payables	8	3
Total	**1,849**	**1,848**

The interest payable increased, mainly because of the withdrawals from the shareholder loan facility, refer to note 14, in combination with increased interest rates.

40. Personnel expenses

TenneT Holding B.V. did not employ any personnel during 2024 or 2023, and as a result did not incur any personnel expenses in those periods. Members of the Executive Board and Supervisory Board of the Company received their remuneration, as disclosed in note 25 of the consolidated financial statements, from other entities within the Group.

41. Other operating expenses

Other operating expenses mainly comprise of consultancy expenses due to advise relating to amongst others the exploration of alternative funding solutions for its German activities.

42. Finance income

Finance income was mainly related to the interest received on inter-company loans and other in-house financing activities (refer to note 35). The inter-company agreements have terms equivalent to those that prevail in arm's length transactions.

43. Finance expenses

Finance expenses comprise mainly interest expenses, such as interest and fees on borrowings and credit facilities. Finance expenses increased, mainly because of the withdrawals from the shareholder loan facility, refer to note 14, in combination with increased interest rates.

44. Commitments and contingencies

Off-balance sheet rights per balance sheet date consist of payment guarantees for an amount of EUR 1,916 million (2023: EUR 2,190 million) issued by TenneT Germany ('Guarantor') to the Company. The Guarantor guarantees to the Company to pay on behalf of TenneT Holding to amongst others its credit providers to complete satisfaction of any and all due payment obligation of the Company.

Furthermore, the Company has provided an irrevocable and unconditional undertaking in relation to the reinsurance arrangements of its subsidiary TenneT Reinsurance N.V. (‘Reinsurer’). In the event that the Reinsurer fails, in whole or in part, to meet its payment obligations, the Company is obliged to take care of the withdrawal of the claims from the claimant or making direct payments to the claimant equivalent to the outstanding default amounts. While no such defaults have occurred to date, the Company continuously monitors its reinsurance exposures and related financial commitments.

45. Events after the reporting period

Please, refer to note 31 of the consolidated financial statements.

Arnhem, 3 March 2025

Executive Board TenneT Holding B.V.
M.J.J. van Beek (Chair)
T.C. Meyerjürgens
M.C. Abbenhuis
A.C.H. Freitag

Supervisory Board TenneT Holding B.V.
A.F. van der Touw (Chair)
A.C.C. van Els
E. Kairisto
E.M. Schöne
M.R.P.M. Camps
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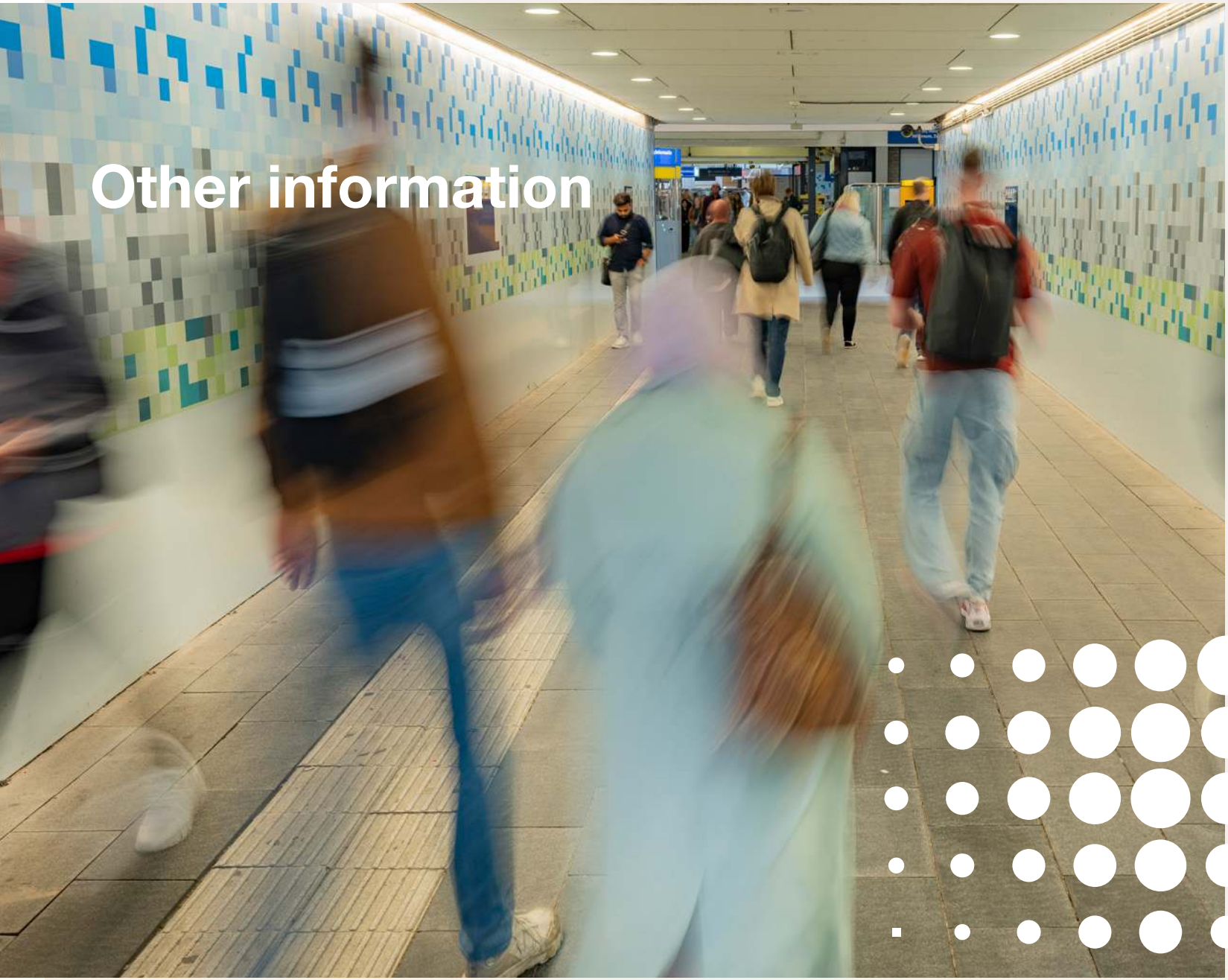

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Profit appropriation

Profit appropriation is governed by Section 38.3 of the Articles of Association, which states the following 'To the extent that the profit is not used to make up prior losses in accordance with the provision of paragraph 2, it shall be at the free disposal of the general meeting. In the calculation of the profit amount to be distributed on every share, only the amount of the compulsory payments on the nominal amount of the shares shall be taken into consideration. In the event of a tied vote on a proposal to distribute or reserve profits, the profits to which the proposal relates shall be reserved'.

Hybrid securities are deeply subordinated securities and are, with the exception of common equity, the most junior instruments in the capital structure of the Company. The hybrid securities are undated and do not default on non-payment of coupons (unless such payment was mandatory following a resolution or payment of a dividend to common shareholders, i.e. as so called ‘dividend pusher’).

The holders of the hybrid securities have limited ability to influence the outcome of a bankruptcy proceeding or a restructuring outside bankruptcy. Consequently, the hybrid security holders cannot oblige TenneT to pay distributions or redeem the securities in part or in full. Payment of distributions on and redemption of the securities is at our sole discretion.

As a result, the hybrid securities are classified as part of the equity attributable to the company's owners.

Independent auditor's report

To: the shareholder and Supervisory Board of TenneT Holding B.V. ("**TenneT**" or the "**Company**")

Report on the audit of the financial statements 2024 included in the Integrated Annual Report 2024

Our opinion

We have audited the financial statements 2024 of TenneT, based in Arnhem, the Netherlands (the "**Financial Statements**"). The Financial Statements comprise the consolidated and company financial statements.

In our opinion:

- the accompanying consolidated financial statements give a true and fair view of the financial position of TenneT as at 31 December 2024, and of its result and its cash flows for 2024 in accordance with International Financial Reporting Standards as adopted by the European Union ("**EU-IFRS**") and with Part 9 of Book 2 of the Dutch Civil Code; and
- the accompanying company financial statements give a true and fair view of the financial position of TenneT as at 31 December 2024, and of its result for 2024 in accordance with Part 9 of Book 2 of the Dutch Civil Code.

The consolidated financial statements comprise:

1. the consolidated statement of financial position as at 31 December 2024;
2. the following statements for 2024: the consolidated statement of income, the consolidated statements of comprehensive income, changes in equity and cash flows; and
3. the notes comprising a summary of the material accounting policies and other explanatory information.

The company financial statements comprise:

1. the company statement of financial position as at 31 December 2024;
2. the company statement of income for 2024; and
3. the notes comprising a summary of the material accounting policies and other explanatory information.

Basis for our opinion

We conducted our audit in accordance with Dutch law, including the Dutch Standards on Auditing. Our responsibilities under those standards are further described in the 'Our responsibilities for the audit of the Financial Statements' section of our report.

We are independent of TenneT in accordance with the EU Regulation on specific requirements regarding statutory audit of public-interest entities, the 'Wet toezicht accountantsorganisaties' (Audit firms supervision act), the 'Verordening inzake de onafhankelijkheid van accountants bij assurance-opdrachten' (Code of Ethics for Professional Accountants, a regulation with respect to independence) and other relevant independence regulations in the Netherlands. Furthermore, we have complied with the 'Verordening gedrags- en beroepsregels accountants' (Dutch Code of Ethics for Professional Accountants).

We believe the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Information in support of our opinion

We designed our audit procedures in the context of our audit of the Financial Statements as a whole and in forming our opinion thereon. The following information in support of our opinion was addressed in this context, and we do not provide a separate opinion or conclusion on these matters.

Materiality

Based on our professional judgement we determined the materiality for the Financial Statements as a whole at EUR 90.0 million (2023: EUR 75.0 million). The materiality is based on 7% of the average underlying operating result for the years 2024, 2023 and 2022. We have also taken into account misstatements and/or possible misstatements that in our opinion are material for the users of the Financial Statements for qualitative reasons.

Component audits are performed using the materiality levels determined by the judgement of the group engagement team, considering materiality for the consolidated financial statements as a whole and the reporting structure of the group. For the largest reporting entities, the audits are performed using the following component materiality levels:

- TenneT GmbH & Co. KG ("**TSO DE**"): EUR 54.0 million (2023: EUR 51.0 million); and
- TenneT TSO B.V. ("**TSO NL**"): EUR 46.8 million (2023: EUR 33.0 million).

For the other reporting entities, the component materiality levels did not exceed EUR 18.0 million (2023: EUR 15.0 million).

We agreed with the Supervisory Board that misstatements in excess of EUR 4.5 million (2023: EUR 3.75 million), which are identified during the audit, would be reported to them, as well as smaller misstatements that in our view must be reported on qualitative grounds.

Scope of the group audit

TenneT is at the head of a group of entities. The financial information of this group is included in the consolidated financial statements of TenneT.

Because we are ultimately responsible for the opinion, we are responsible for directing, supervising and performing the group audit. In this respect we have determined the nature and extent of the audit procedures to be carried out for reporting entities. Decisive were the size and/or the risk profile of the reporting entities or operations. On this basis, we selected reporting entities for which an audit had to be carried out on the complete set of financial information or specific items.

In establishing the overall group audit strategy and plan, we determined the type of work that needed to be performed at the components by the group engagement team and the component auditors.

Where the work was performed by component auditors, we determined the level of involvement we needed to have in the audit work at those components to be able to conclude whether sufficient appropriate audit evidence was obtained as a basis for our opinion on the Financial Statements as a whole. For each component we determined whether we required an audit of their complete financial information or whether other procedures would be sufficient.

Our group audit mainly focused on the significant group entities TenneT Holding B.V., TSO DE and TSO NL, because combined they make up more than 95% of the group's revenue, operating result and assets. We included additional reporting entities in the scope of our group audit to have additional audit coverage on the group's consolidated financial statements, and performed other procedures with respect to residual risk in components and account balances that have not been included in audit scope.

The group consolidation, Financial Statements disclosures and certain centrally coordinated accounting topics were audited by the group engagement team. These topics included among others treasury and corporate income tax. Team members with specialized knowledge were involved in the areas of forensic, tax, accounting, valuation, pension and information technology.

Based on our risk assessment, we determined the nature, timing and extent of audit procedures to be performed, including determining the components at which to perform audit procedures. We have obtained the following audit coverage of the group with our audit procedures:

Audit coverage	
IFRS revenue	99%
IFRS operating result	99%
IFRS assets	99%

By performing the procedures mentioned above at group entities, together with additional procedures at group level, we have been able to obtain sufficient and appropriate audit evidence about the group's financial information to provide an opinion on the consolidated financial statements.

Audit approach fraud risks

We identified and assessed the risks of material misstatements of the Financial Statements due to fraud. During our audit we obtained an understanding of the Company and its environment and the components of the system of internal control, including the risk assessment process and management's process for responding to the risks of fraud and monitoring the system of internal control and how the Supervisory Board exercises oversight, as well as the outcomes.

We evaluated the design and relevant aspects of the system of internal control and in particular the fraud risk assessment, as well as among others the code of conduct, whistle blower procedures and incident registration. We evaluated the design and the implementation and, where considered appropriate, tested the operating effectiveness, of internal controls designed to mitigate fraud risks.

As part of our process of identifying fraud risks, we evaluated fraud risk factors with respect to financial reporting fraud, misappropriation of assets and bribery and corruption in close co-operation with our forensic specialists. We evaluated whether these factors indicate that a risk of material misstatement due to fraud is present.

We identified the following fraud risks and performed the following specific procedures:

- We evaluated TenneT's fraud risk assessment and made inquiries with management, those charged with governance and others within TenneT, including but not limited to the units/departments (i) Internal Audit, (ii) Compliance & Integrity and (iii) Financial Governance Services. We reviewed their process for identifying and responding to the risk of fraud, the internal communication regarding their views on business practices and ethical behaviour and whether they have knowledge of any actual, suspected or alleged fraud affecting the Company.
- We held discussions amongst team members and component auditors to identify fraud risk factors and considered whether other information obtained from our risk assessment procedures indicated risks of material misstatement due to fraud. Fraud risk factors identified include among others:
  - fraud, bribery and corruption;
  - compliance with respect to trade regulations/sanctions;
  - compliance with respect to environmental requirements; and
  - compliance with procurement policies.

- We evaluated whether unusual or unexpected relationships have been identified in performing analytical procedures, that may indicate risks of material misstatement due to fraud
- We pinpointed the significant risk of material misstatement due to fraud related to management override of controls to (i) the classification of expenditures given their relevance to regulatory accounting and thus future revenues, and (ii) the procurement on TenneT's largest Target Grid 2045 projects given their size and strategic importance.
- We determined overall responses to address the assessed risks of material misstatement due to fraud which included:
  - assigning and supervising personnel with the adequate knowledge, skills and ability;
  - evaluating whether the selection and application of accounting policies by the group, particularly those related to subjective measurements and complex transactions, may be indicative of fraudulent financial reporting;
  - we tested the operating effectiveness of the relevant controls in the business processes surrounding project procurement and project cost accounting;
  - incorporating elements of unpredictability in the selection of the nature, timing and extent of our audit procedures, e.g. related to our selections for further testing of tangible fixed asset projects, including Target Grid 2045 projects and related capital expenditures;
  - we tested the appropriateness of journal entries recorded in the general ledger and other adjustments made in the preparation of the Financial Statements;
  - evaluating whether the judgements and decisions made by management in making the accounting estimates included in the Financial Statements indicate a possible bias that may represent a risk of material misstatement due to fraud. Significant accounting judgements, estimates and assumptions that might have a major impact on the Financial Statements are disclosed in note 1 of the consolidated financial statements. Useful life of assets, grid expense payables and the provision for decommissioning were focus areas in our audit as the related account balances are subject to significant management judgement. Reference is made to the section "Our key audit matters"; and
  - performing a retrospective review of management judgements and assumptions related to significant accounting estimates such as cost assumptions on the decommissioning provisions and in-feed management accruals reflected in prior year financial statements. We considered available information and made enquiries of relevant executives, directors and the Supervisory Board.

  Based on our procedures performed, we have no matters to report.

Audit approach compliance with laws and regulations

As part of obtaining an understanding of TenneT and its environment we obtained a general understanding of the legal and regulatory framework applicable to TenneT and the industry in which it operates and how TenneT is complying with that framework. Moreover, we performed the following procedures:

- We assessed the laws and regulations relevant to the Company through discussion with management, those charged with governance and others within TenneT, including the units (i) Internal Audit, Risk & Internal Control and Compliance & Integrity, (ii) Legal Affairs, (iii) Regulatory Affairs (iv) Business Guidance and (v) Financial Governance Services. We have read related minutes and reports. We involved our forensic specialists in our evaluation.
- We obtained sufficient appropriate audit evidence regarding provisions of those laws and regulations generally recognised to have a direct effect on the determination of material amounts and disclosures in the Financial Statements such as (corporate) tax and pension laws and financial reporting regulations, the requirements under EU-IFRS and Part 9 of Book 2 of the Dutch Civil Code.
- Apart from these, TenneT is subject to other laws and regulations where the consequences of non-compliance could have a material effect on amounts and/or disclosures in the Financial Statements, for instance, through imposing fines or litigation. Given the nature of TenneT's business and the complexity of European public procurement regulations, the Elektriciteitswet (Dutch Electricity Act), the Energiewirtschaftsgesetz (German Energy Industry Act), and other relevant Dutch and German energy laws and regulations, as well as environmental laws, there is a risk of non-compliance with the requirements of such laws and regulations. In addition, we considered relevant laws and regulations applicable to listed companies.
- Our procedures are more limited with respect to other laws and regulations that do not have a direct effect on the determination of the amounts and disclosures in the Financial Statements. These laws and regulations compliance may be fundamental to the operating aspects of the business, to TenneT's ability to continue its business, or to avoid material penalties (e.g. compliance with the energy laws in the Netherlands and Germany or compliance with environmental regulations) and therefore non-compliance with such laws and regulations may have a material effect on the Financial Statements. Our responsibility is limited to undertaking specified audit procedures to help identify non-compliance with those laws and regulations that may have a material effect on the Financial Statements.
- Our procedures are limited to (i) inquiry of the Executive Board, the Supervisory Board and others within TenneT as to whether the Company is in compliance with such laws and regulations and (ii) inspecting correspondence, if any, with the relevant licensing or regulatory authorities to help identify non-compliance with those laws and regulations that may have a material effect on the Financial Statements.

- We remained alert to indications of (suspected) non-compliance throughout the audit.
- We obtained written representations that all known instances of (suspected) fraud or non-compliance with laws and regulations have been disclosed to us.

Based on our procedures performed, we have no matters to report.

Audit approach going concern

We are responsible to obtain sufficient and appropriate audit evidence regarding the appropriateness of management's use of the going concern assumption in preparing the financial statements. Management is responsible to assess the Company's ability to continue as a going concern and disclosing in the Financial Statements any events or circumstances that may cast significant doubt on the Company's ability to continue as a going concern. As described in note 1, the Executive Board holds the view that no events or conditions give rise to doubt about the ability of the Company to continue in operation, for at least one year from the date of the end of the reporting period.

To fulfil our responsibilities, we performed the following procedures:

- we evaluated management's assessment of the going concern assumption and related disclosure note 1 of the Financial Statements;
- we challenged management's cash flow forecasts and primary assumptions, also in the light of our understanding obtained with regards to management's outlook as reported in the Executive Board Report;
- we evaluated the Company's capital management objectives, including its long-term credit rating and liquidity on a rolling 12-month forward looking basis as disclosed in note 11; and
- we evaluated the Company's repayment obligations as disclosed in note 20.

Based on our procedures performed, we have no matters to report.

Our key audit matters

Key audit matters are those matters that, in our professional judgement, were of most significance in our audit of the Financial Statements. We have communicated the key audit matters to the Supervisory Board. The key audit matters are not a comprehensive reflection of all matters discussed.

These matters were addressed in the context of our audit of the Financial Statements as a whole and in forming our opinion thereon, and we do not provide a separate opinion on these matters.

1. Project Voltura

Description

On June 20, 2024, TenneT announced that TenneT and Kreditanstalt für Wiederaufbau (KfW) terminated the discussions on a full sale of TSO DE ("**Project Ampere**"). Subsequently, TenneT started to explore alternative funding solution for its German activities, including public (potential listing) and private capital markets ("**Project Voltura**"). Consequently, TenneT concluded as at 30 June 2024 that it is no longer highly probable that TenneT Germany for 100% will be sold to KfW. Consequently, IFRS 5 'Non current assets held for sale and discontinued operations' Accounting Standard is no longer applied in the consolidated financial statements. The German activities are presented as continued operations and the comparative figures 2023 for the P&L and the balance sheet per 31 December 2023 have been adjusted voluntary.

We have included this as a key audit matter because of:

- the additional reporting risks such as incorrectly concluding that IFRS 5 is not applicable; and
- the one-off nature of this potential transaction could lead to incorrect accounting and incomplete disclosures on the matter.

Our response

We performed the following procedures:

- we obtained a detailed understanding of the (internal) process that TenneT management uses to keep track of all developments in Project Voltura;
- we have reviewed all relevant minutes and reports, made regular inquiries with TenneT's Executive Board, Supervisory Board, and other key officers involved;
- we performed an analysis on the media coverage surrounding this topic, including potential developments in the process; and
- we evaluated the affected accounting positions, and the related disclosures in the Financial Statements around the project.

Our observations

Our procedures did not identify material observations and we considered management's judgement and the disclosure thereon to be adequate.

2. Tangible fixed assets

Description

Securing supply and facilitating the energy transition by expanding and enhancing the high-voltage grid through integration of sustainable energy sources require substantial investments and flexible access to (equity) funding. TenneT increased its annual investment volume to EUR 10.6 billion in 2024 for on- and offshore grid connections.

We have included this as a key audit matter because of:

- the financial significance of the tangible fixed assets and related capital expenditures;

- the risks associated with large investment projects, complexity in procurement, construction and timely completion;
- the professional judgement required in determining the impact of the energy transition on (i) (funding) the capital investment planning, and (ii) the existing asset portfolio, including the assessment of remaining useful lives of assets; and
- the professional judgement required in (i) assessing whether there is any indication that an asset may be impaired and (ii) if there is any such indication, estimating the recoverable amount of that asset (i.e. measuring any impairment).

Our response

We performed the following procedures:

- we tested the internal control environment related to tangible fixed assets through testing of operating effectiveness of relevant controls, including controls related to (i) investment approval, (ii) the financial closing of assets under construction, and (iii) the periodic reassessment of the useful lives of tangible fixed assets;
- we tested the design and implementation of relevant controls related to TenneT's liquidity forecast underpinning its ability to finance investments;
- we obtained and discussed internal management reports about progress of the key assets under construction and performed tests of details on the additions to and other movements in tangible fixed assets;
- we performed substantive tests of details on the capitalised amounts including those related to internal hours;
- we evaluated management's estimation of the useful lives of tangible fixed assets based on economic, regulatory and technical data; and
- we evaluated management's assessment that no indications were identified that any assets may be impaired as at 31 December 2024.

Our observations

Our procedures did not identify material observations and we considered management's key assumptions, to be within the reasonable range of our own expectations.

3. Provision for decommissioning of (offshore) assets

Description

Moving towards a future with renewable energy sources involves significant investments in (offshore) assets that are to be decommissioned in the future, thus requiring recognition of decommission provisions. The corresponding provisions are based on estimates of costs, timing of decommissioning, discount rates and inflation.

We have included this as a key audit matter because of:

- the significance of the provision and additions for the year triggered by the start of construction of new (offshore) assets; and
- the uncertainty involved in measuring the provision and sensitivity to changes in key assumptions, including the cost base, the inflation rate and the discount rate.

Our response

We performed the following procedures:

- we have obtained management's position papers on the cost assumptions and alignment of the methodology across the Netherlands and Germany. Our audit procedures included testing of design and implementation of relevant controls around the periodical assessment of these assumptions and the evaluation of the financial model used to calculate the provision;
- the reasonability of the key assumptions through comparison with observable market data and procedures to address the completeness of the provision; and
- we evaluated the appropriateness of the disclosure of the accounting policy and estimation uncertainty of these provisions.

Our observations

As part of our evaluation of management's estimate, we obtained their position paper detailing the changes in estimates made and reasons to do so. We subsequently challenged the revised assumptions with external sources and tested the inputs as well as the model used to determine the revised asset retirement obligation. Our procedures did not result in any matters to report.

Report on the other information included in the Integrated Annual Report 2024

The Integrated Annual Report 2024 contains other information, in addition to the Financial Statements and our auditor's report thereon (the "**Other Information**").

The Other Information consists of:

1. the Director's Report, consisting of:
   a. the Executive Board Report; and
   b. the Sustainability statements;
2. the Supervisory Board report;
3. other information as required by Part 9 of Book 2 of the Dutch Civil Code; and
4. other information included in the Integrated Annual Report.

Based on the following procedures performed, we conclude that the Other Information:

- is consistent with the Financial Statements and does not contain material misstatements; and
- contains all the information regarding the director's report and the other information as required by Part 9 of Book 2 of the Dutch Civil Code.

We have read the Other Information. Based on our knowledge and understanding obtained through our audit of the Financial Statements or otherwise, we have considered whether the Other Information contains material misstatements.

By performing these procedures, we comply with the requirements of Part 9 of Book 2 of the Dutch Civil Code and the Dutch Standard on Auditing 720. The scope of the procedures performed is substantially less than the scope of those performed in our audit of the Financial Statements.

Management is responsible for the preparation of the Other Information, including the Director's Report in accordance with Part 9 of Book 2 of the Dutch Civil Code, and the other information as required by Part 9 of Book 2 of the Dutch Civil Code.

Report on other legal and regulatory requirements and ESEF

Engagement

We were engaged by the annual meeting of shareholders as auditor of TenneT on 18 December 2019, as of the audit for the year 2020 and have operated as statutory auditor ever since that financial year.

No prohibited non-audit services

We have not provided prohibited non-audit services as referred to in Article 5(1) of the EU Regulation on specific requirements regarding statutory audit of public-interest entities.

European Single Electronic Format (ESEF)

TenneT has prepared its annual report in ESEF. The requirements for this are set out in the Delegated Regulation (EU) 2019/815 with regard to regulatory technical standards on the specification of a single electronic reporting format (the "**RTS on ESEF**").

In our opinion, the annual report, prepared in XHTML format, including the (partly) marked-up consolidated financial statements, as included in the reporting package by TenneT complies in all material respects with the RTS on ESEF.

Management is responsible for preparing the annual report including the Financial Statements in accordance with the RTS on ESEF, whereby management combines the various components into one single reporting package.

Our responsibility is to obtain reasonable assurance for our opinion whether the annual report in this reporting package complies with the RTS on ESEF.

We performed our examination in accordance with Dutch law, including Dutch Standard 3950N 'Assurance-opdrachten inzake het voldoen aan de criteria voor het opstellen van een digitaal verantwoordingsdocument' (assurance engagements relating to compliance with criteria for digital reporting). Our examination included amongst others:

Our examination included amongst others:

- Obtaining an understanding of the Company's financial reporting process, including the preparation of the reporting package.
- Identifying and assessing the risks that the annual report does not comply in all material respects with the RTS on ESEF and designing and performing further assurance procedures responsive to those risks to provide a basis for our opinion, including:
  - obtaining the reporting package and performing validations to determine whether the reporting package containing the Inline XBRL instance and the XBRL extension taxonomy files has been prepared in accordance with the technical specifications as included in the RTS on ESEF; and
  - examining the information related to the consolidated Financial Statements in the reporting package to determine whether all required mark-ups have been applied and whether these are in accordance with the RTS on ESEF.

Description of responsibilities regarding the Financial Statements

Responsibilities of management and the Supervisory Board for the Financial Statements

Management is responsible for the preparation and fair presentation of the Financial Statements in accordance with EU-IFRS and Part 9 of Book 2 of the Dutch Civil Code. Furthermore, management is responsible for such internal control as management determines is necessary to enable the preparation of the Financial Statements that are free from material misstatement, whether due to fraud or error.

As part of the preparation of the Financial Statements, management is responsible for assessing the Company's ability to continue as a going concern. Based on the financial reporting frameworks mentioned, management should prepare the Financial Statements using the going concern basis of accounting unless management either intends to liquidate the company or to cease operations, or has no realistic alternative but to do so.

Management should disclose events and circumstances that may cast significant doubt on the Company's ability to continue as a going concern in the Financial Statements.

The Supervisory Board is responsible for overseeing the Company's financial reporting process.

Our responsibilities for the audit of the Financial Statements

Our objective is to plan and perform the audit engagement in a manner that allows us to obtain sufficient and appropriate audit evidence for our opinion.

Our audit has been performed with a high, but not absolute, level of assurance, which means we may not detect all

material misstatements, whether due to fraud or error, during our audit.

Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of the Financial Statements. The materiality affects the nature, timing and extent of our audit procedures and the evaluation of the effect of identified misstatements on our opinion.

We have exercised professional judgement and have maintained professional skepticism throughout the audit, in accordance with Dutch Standards on Auditing, ethical requirements and independence requirements.

Our audit included among others:

- Identifying and assessing the risks of material misstatement of the Financial Statements, whether due to fraud or error, designing and performing audit procedures responsive to those risks, and obtaining audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.
- Obtaining an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Company's internal control.
- Evaluating the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by management.
- Concluding on the appropriateness of management's use of the going concern basis of accounting, and based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Company's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditor's report to the related disclosures in the Financial Statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause the Company to cease to continue as a going concern.
- Evaluating the overall presentation, structure and content of the Financial Statements, including the disclosures.
- Evaluating whether the Financial Statements represent the underlying transactions and events in a manner that achieves fair presentation.

We are responsible for planning and performing the group audit to obtain sufficient appropriate audit evidence regarding the financial information of the entities or business units within the group as a basis for forming an opinion on the financial statements. We are also responsible for the direction, supervision and review of the audit work performed for purposes of the group audit. We bear the full responsibility for the auditor's report.

We communicate with the Supervisory Board regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant findings in internal control that we identified during our audit. In this respect we also submit an additional report to the Audit, Risk and Compliance Committee in accordance with Article 11 of the EU Regulation on specific requirements regarding statutory audit of public-interest entities. The information included in this additional report is consistent with our audit opinion in this auditor's report.

We provide the Supervisory Board with a statement that we have complied with relevant ethical requirements regarding independence, and to communicate with them all relationships and other matters that may reasonably be thought to bear on our independence, and where applicable, related safeguards.

From the matters communicated with the Supervisory Board, we determine the key audit matters: those matters that were of most significance in the audit of the Financial Statements. We describe these matters in our auditor's report unless law or regulation precludes public disclosure about the matter or when, in extremely rare circumstances, not communicating the matter is in the public interest.

Rotterdam, 3 March 2025

Deloitte Accountants B.V.

Signed on the original: J.A. de Bruin

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Limited assurance report of the independent auditor on the sustainability statement

To: the shareholder and Supervisory Board of TenneT Holding B.V. ("**TenneT**" or the "**Company**")

Our conclusion

We have performed a limited assurance engagement on the (consolidated) sustainability statement for 2024 of TenneT, based in Arnhem the Netherlands included in the section 'Sustainability statements' in the Integrated Annual Report (the "**Sustainability statement**"), including the information incorporated in the Sustainability statement by reference.

Based on our procedures performed and the assurance evidence obtained, nothing has come to our attention that causes us to believe that the Sustainability statement is not, in all material respects:

- prepared in accordance with the European Sustainability Reporting Standards ("**ESRS**") as adopted by the European Commission and in accordance with the double materiality assessment process carried out by the Company to identify the information reported pursuant to the ESRS; and
- compliant with the reporting requirements provided for in Article 8 of Regulation (EU) 2020/852 (the "**Taxonomy Regulation**").

Basis for our conclusion

We have performed our limited assurance engagement on the Sustainability statement in accordance with Dutch law, including Dutch Standard 3810N, 'Assurance-opdrachten inzake duurzaamheidsverslaggeving' (Assurance engagements relating to sustainability reporting) which is a specified Dutch standard that is based on the International Standard on Assurance Engagements (ISAE) 3000 (Revised) 'Assurance engagements other than audits or reviews of historical financial information'.

Our responsibilities in this regard are further described in the section 'Our responsibilities for the limited assurance engagement on the Sustainability statement' of our report.

We are independent of TenneT in accordance with the 'Verordening inzake de onafhankelijkheid van accountants bij assurance-opdrachten' ("**ViO**", Code of Ethics for Professional Accountants, a regulation with respect to independence) and other relevant independence regulations in the Netherlands. Furthermore, we have complied with the 'Verordening gedrags- en beroepsregels accountants' ("**VGBA**", Dutch Code of Ethics for Professional Accountants).

The ViO and VGBA are at least as demanding as the International code of ethics for professional accountants (including International independence standards) of the International Ethics Standards Board for Accountants.

We believe that the assurance evidence we have obtained is sufficient and appropriate to provide a basis for our conclusion.

Emphases of matter

Emphasis on the most significant uncertainties affecting the quantitative metrics and monetary amounts

We draw attention to the section 'Use of estimations' (page 130) in the Sustainability statement that identifies the quantitative metrics that are subject to a high level of measurement uncertainty and discloses information about the sources of measurement uncertainty and the assumptions, approximations and judgements the Company has made in measuring these in compliance with the ESRS.

The comparability of sustainability information between entities and over time may be affected by the lack of historical sustainability information in accordance with the ESRS and by the absence of a uniform practice on which to draw, to evaluate and measure this information. This allows for the application of different, but acceptable, measurement techniques, especially in the initial years.

Emphasis on the double materiality assessment process

We draw attention to sections 'Statement on due diligence' (page 130) and 'Double materiality assessment' (pages 132-135) in the Sustainability statement. This disclosure explains future improvements in the ongoing due diligence and double materiality assessment process, including how the entity communicated with affected stakeholders. Due diligence is an on-going practice that responds to and may trigger changes in the Company's strategy, business model, activities, business relationships, operating, sourcing and selling contexts. The double materiality assessment process

may also be impacted in time by sector-specific standards to be adopted. The Sustainability statement may not include every impact, risk and opportunity or additional entity-specific disclosure that each individual stakeholder (group) may consider important in its own particular assessment.

Emphasis on the use of third party information

We draw attention to section 'Basis for preparation' in the Sustainability statement that indicates that certain metrics and calculations are (partly) based on assumptions and sources from third parties. These assumptions and sources are disclosed in the basis of preparation of the respective metric. Validation of such third-party information and certifications is not common market practice.

Our conclusion is not modified in respect of these matters.

Comparative information

The Sustainability statement has been prepared in accordance with ESRS for the first time. As a consequence, the comparative information has not been subject to reasonable or limited assurance procedures. Our conclusion is not modified in respect of this matter.

Limitations to the scope of our assurance engagement

In reporting forward-looking information in accordance with the ESRS, management of the Company is required to prepare the forward-looking information on the basis of disclosed assumptions about events that may occur in the future and possible future actions by the Company. The actual outcome may differ, as anticipated events frequently do not occur as expected. Forward-looking information relates to events and actions that have not yet occurred and may never occur. We do not provide assurance on the achievability of this forward-looking information.

Our conclusion is not modified in respect of this matter.

Responsibilities of management and the Supervisory Board for the Sustainability statement

Management is responsible for the preparation of the Sustainability statement in accordance with the ESRS, including the double materiality assessment process carried out by the Company as the basis for the Sustainability statement and disclosure of material impacts, risks and opportunities in accordance with the ESRS. As part of the preparation of the Sustainability statement, management is responsible for compliance with the reporting requirements provided for the Taxonomy Regulation.

Management is also responsible for selecting and applying additional entity-specific disclosures to enable users to understand the Company's sustainability-related impacts, risks or opportunities and for determining that these additional entity-specific disclosures are suitable in the circumstances and in accordance with the ESRS.

Furthermore, management is responsible for such internal control as it determines is necessary to enable the preparation of the Sustainability statement that is free from material misstatement, whether due to fraud or error.

The Supervisory Board is responsible for overseeing the sustainability reporting process including the double materiality assessment process carried out by the Company.

Our responsibilities for the limited assurance engagement on the Sustainability statement

Our responsibility is to plan and perform the limited assurance engagement in a manner that allows us to obtain sufficient appropriate assurance evidence for our conclusion.

Our assurance engagement is aimed to obtain a limited level of assurance that the Sustainability statement is free from material misstatements. The procedures vary in nature and timing from, and are less in extent than for a reasonable assurance engagement. Consequently, the level of assurance obtained in a limited assurance engagement is substantially lower than the assurance that would have been obtained had a reasonable assurance engagement been performed.

We apply the applicable quality management requirements pursuant to the 'Nadere voorschriften kwaliteitsmanagement' (regulations for quality management) and accordingly maintain a comprehensive system of quality management including documented policies and procedures regarding compliance with ethical requirements, professional standards and other relevant legal and regulatory requirements.

Our limited assurance engagement included among others:

- Performing inquiries and an analysis of the external environment and obtaining an understanding of relevant sustainability themes and issues, the characteristics of the Company, its activities and the value chain and its key intangible resources in order to assess the double materiality assessment process carried out by the Company as the basis for the Sustainability statement and disclosure of all material sustainability-related impacts, risks and opportunities in accordance with the ESRS.
- Obtaining through inquiries a general understanding of the Company's (i) internal control environment, (ii) processes for gathering and reporting entity-related and value chain information, (iii) information systems and (iv) risk assessment process, to the extent relevant for:
  - the preparation of the Sustainability statement; and
  - the preparation of the disclosures provided for in the Taxonomy Regulation, including the determination of eligible and aligned economic activities,

  without obtaining assurance information about the implementation, or testing the operating effectiveness, of related controls.

- Assessing the double materiality assessment process carried out by the Company and identifying and assessing areas of the Sustainability statement, including the disclosures provided for in the Taxonomy Regulation, where misleading or unbalanced information or material misstatements, whether due to fraud or error, are likely to arise ("**Selected Disclosures**"). Responsive to this risk analysis, we designed and performed further assurance procedures aimed at assessing that the Sustainability statement is free from material misstatements.
- Considering whether the description of the double materiality assessment process as disclosed in the Sustainability statement appears consistent with the process carried out by the Company.
- Determining the nature and extent of the procedures to be performed for the group components and locations. Decisive were the size and/or the risk profile of these components and locations.
- Performing analytical review procedures on quantitative information in the Sustainability statement, including consideration of data and trends in the information submitted for consolidation at corporate level.
- Assessing whether the Company's methods for developing estimates are appropriate and have been consistently applied for the Selected Disclosures. We considered data and trends; however, our procedures did not include testing the data on which the estimates are based or separately developing our own estimates against which to evaluate management's estimates.
- Analysing, on a limited sample basis, relevant internal and external documentation available to the Company (including publicly available information or information from actors throughout its value chain) for the Selected Disclosures.
- Reading the other information in the annual report to identify material inconsistencies, if any, with the Sustainability statement.
- Considering whether:
  - the disclosures, addressing the reporting requirements provided for in the Taxonomy Regulation for each of the environmental objectives, (i) reconcile with the underlying records of the Company, (ii) are consistent with the Sustainability statement and (iii) appear reasonable, in particular whether the eligible economic activities meet the cumulative conditions to qualify as aligned and whether the technical screening criteria are met; and
  - the key performance indicators' disclosures have been defined and calculated (i) in accordance with the Taxonomy reference framework (as defined in Appendix 1 Glossary of Terms of the CEAOB Guidelines on limited assurance on sustainability reporting adopted on 30 September 2024) and (ii) in compliance with the reporting requirements provided for in the Taxonomy Regulation, including the format in which the activities are presented.
- Considering the overall presentation, structure and the fundamental qualitative characteristics of information (relevance and faithful representation: complete, neutral and accurate) reported in the Sustainability statement, including the reporting requirements provided for in the Taxonomy Regulation.
- Considering, based on our limited assurance procedures and evaluation of the assurance evidence obtained, whether the Sustainability statement as a whole is free from material misstatements and prepared in accordance with the ESRS.

Rotterdam, 3 March 2025

Deloitte Accountants B.V.

Signed on the original: J.A. de Bruin

About this report

Scope of this report

The scope of this integrated report is TenneT Holding B.V. and the subsidiaries in which it has a controlling interest. For disclosures on specific topics like our greenhouse gas emissions and incident reporting, this integrated report covers a broader scope than the operations of the group and includes aspects of our value chain. When aspects of our value chain have been considered, this has been indicated.

A complete overview of all the consolidated entities in this Integrated Annual Report is disclosed in note 30 of the consolidated financial statements. Our reporting policy in the event of acquisitions or divestments is disclosed in notes 1 and 6 of the consolidated financial statements. For non-financial performance we report acquisitions and divestments from the day of purchase or when an entity is sold respectively. We recognise that in the event of acquisitions, reporting improvements may be required which may result in data gaps or estimates. In 2024, there were no significant acquisitions or divestments impacting our non-financial reporting.

This integrated report covers the full year 2024, i.e. 1 January 2024 to 31 December 2024. TenneT's Integrated Annual Report 2024 was published on 6 March 2025 and is available online.

Reporting principles

The financial information in this report was prepared in accordance with IFRS, as adopted by the EU, and complies with Part 9 of Book 2 of the Dutch Civil Code. Our non-financial qualitative and quantitative information was prepared in accordance with the disclosure requirements of the European Sustainability Reporting Standards (ESRS) pursuant of the EU Corporate Sustainability Reporting Directive (CSRD), supplemented with the GRI G4 Electric Utilities Sector Disclosures and own reporting criteria developed by TenneT for entity-specific disclosures like, for example, TenneT's avoided emissions. In accordance with ESRS 1, we have incorporated the required disclosures as outlined by the EU Taxonomy Regulation (Article 8 of Regulation (EU) 2020/852 and associated delegated acts).

In accordance with the policy on state-owned companies (Nota Deelnemingenbeleid Rijksoverheid 2022), TenneT complies with the Dutch Corporate Governance Code, as laid down in the Corporate Governance section of this report. As required per this policy, TenneT also signed the Diversity Charter in 2021 and embraces the principles of the Tax Governance Code.

We have used the Integrated Reporting (IR) framework, as defined by the International Integrating Reporting Council (IIRC, which together with SASB formed the Value Reporting Foundation in 2021) as a basis for the Executive Board report. Furthermore, this report is also part of our progress and how we implement the 10 principles of the United Nations Global Compact (UNGC). We have endorsed these principles since 2015, not just to underline our own commitment, but also to drive CSR performance in the value chain. The UNGC principles are the basis of our TenneT Supplier Code of Conduct and mandatory for all suppliers. New suppliers who do not meet our standards during supplier visits, are disqualified from our tender procedures. The way communication on the progress related to the UNGC has changed in 2022 and as of 2023 this will be shared via the UNGC website.

In 2015, the United Nations launched the Sustainable Development Goals (SDGs). These goals are accepted worldwide as driving sustainability. The section in our Integrated Annual Report 'The Sustainable Development Goals' describes our impact and the contribution we make to the SDGs that are most relevant to our business.

Stakeholders and materiality

In accordance with the applied reporting principles, this integrated report covers topics considered material to our organisation. TenneT uses the materiality principle to determine which subjects/impacts to include in the integrated report related to which activities (also with respect to our value chain) to take into account. Our corporate website (www.tennet.eu) includes additional information which was not considered material for integrated reporting purposes. How we defined the material topics and the results of this assessment can be found in the Sustainability Statements – Double materiality assessment section. The fact that we report on selected topics does not mean we do not manage aspects that are not considered material to our business. Our activities and CSR policy are broader and are not limited to the outcome of the materiality analysis. For more detailed information, go to the CSR section of our website.

Data collection process

The reported data is obtained from financial and non-financial data management systems in our own operations, such as SAP for financial and HR data, Mecoms for our electricity transport data, and Zenya for our incident reporting, i.e. safety data. The key non-financial qualitative and quantitative data is included in the regular planning and control cycles and reported internally at least once a quarter by the Business Guidance department which performs a check on the quality

and reliability of the data. TenneT's Executive Board and senior management contribute to the context of the report and the quantitative data.

The definitions and calculations used are disclosed in the abbreviations and definitions section of this Integrated Annual Report and in the CSR section of our corporate website. The definitions and calculations used were re-assessed based on such things as process improvements, further alignment within the group and the materiality analysis. As a result, certain originally reported comparative figures were re-classified to conform to the current year's presentation. The data for this report was measured, and where no data was available, it was estimated. An example of this is the outflow of materials. Due to the nature and maturity level of non-financial data, we acknowledge that it is a journey to fully align this with the level of financial systems and processes. Therefore, improvements can be made over time with the aim to provide our stakeholders better and more relevant information.

External assurance

The financial statements included in this report are subject to an independent external audit and TenneT's non-financial reporting is subject to a limited assurance review. These were both conducted by our external auditor, Deloitte Accountants B.V. We have requested Deloitte to review the Sustainability statements and by 'incorporation by reference' the sections or IAR2024 as listed in the respective table in the Appendix of the Sustainability statements in accordance with ESRS as required by the CSRD and audit the financial statements in accordance with IFRS as adopted by the EU and Part 9 of Book 2 of the Dutch Civil Code.

Other information

TenneT Holding B.V. and its subsidiaries are a leading electricity transmission system operator with activities in the Netherlands and a large part of Germany. In the Netherlands, our activities are conducted by TenneT TSO B.V. and its subsidiaries. In Germany, our activities are performed by TenneT GmbH & Co. KG and its subsidiaries.

The Dutch state owns the entire issued share capital of TenneT Holding B.V. Furthermore, TenneT Holding B.V. has issued hybrid securities which are deeply subordinated and are accounted for as part of equity attributable to equity holders of the Company. The registered office of TenneT Holding B.V. is located at Utrechtseweg 310, Arnhem, the Netherlands, with its statutory seat in Arnhem and a registration with the Dutch Commercial Register under number 09083317.

Key figures: five-year summary

Based on underlying figures	2024	2023	2022	2021	2020
Building the electricity grid of tomorrow					
Investments (EUR million)	10,637	7,730	4,493	3,969	3,412
# connections realised[1]	40	–	–	–	–
# connection requests[1]	728	–	–	–	–
Circuit length (kilometres)[1]	245	–	–	–	–
Newly installed GW offshore	0.0	2.3	0.0	1.4	0.7
Utilise the grid to empower society					
Grid availability (onshore)	99.99988%	99.99993%	99.99963%	99.99999%	99.99995%
Grid availability (offshore)	97.09%	97.90%	94.08%	94.09%	94.03%
Deliver more grid capacity together for our customers and to serve society					
Number of initiatives with other stakeholders that helped build the grid faster or utilised the grid better[1]	30	27	11	13	–
Create a safe and inspiring workplace					
TRIR	4.0	4.5	4.9	5.8	4.1
Absentee rate NL	3.6	3.9	3.7	3.1	2.7
Absentee rate DE	3.3	3.4	4.1	2.6	2.5
Percentage of female inflow of total inflow	32%	32%	33%	31%	33%
Percentage of non-Dutch non-German inflow	11%	11%	9%	–	–
Transition to a brighter energy future within social and planetary boundaries					
Reduction of carbon footprint compared to base year 2019 (Scope 1 and scope 2 market-based emissions)[1]	93%	20%	–	–	–
Percentage of non-virgin materials procured	2%	–	–	–	–
Percentage of recoverable waste	97%	75-90%	75-90%	75-90%	75-90%
Number of environmental incidents	171	190	97	81	57
Percentage of supplier visits performed that meet or standards (of a.o. quality, sustainability, etc.)	77%	82%	86%	83%	96%
Safeguard sustainable financial performance					
Underlying EBIT (EUR million)	1,745	1,817	1,210	834	910
Adjusted FFO/Net debt	8.2%	11.6%	11.1%	10.5%	11.3%
ROIC	4.7%	5.8%	4.9%	4.2%	5.1%

[1] New metrics we report as of 2024. As data is more difficult to obtain for the previous years it is not included.

Definitions

Power units

- Power is energy per unit of time
- Power output is measured in watts (W)
- 1 kW (kilowatt) = 1,000 W
- 1 MW (megawatt) = 1,000 kW
- 1 GW (gigawatt) = 1,000,000 kW

Energy units

- Energy is power multiplied by time
- 1 kWh (kilowatt hour) = 1 kW in one hour
- 1 MWh (megawatt hour) = 1,000 kWh
- 1 GWh (gigawatt hour) = 1,000,000 kWh
- 1 TWh (terawatt hour) = 1,000,000,000 kWh

Weight units

- ktonnes (kilotonnes) = 1,000 tonnes
- Mt or Mtonnes (megatonnes) = 1,000,000 tonnes

Voltage

- 1 kV (kilovolt) = 1,000 volts (V)

Glossary

AC – Alternating Current
In alternating current (AC), the flow of electricity periodically reverses direction. By contrast direct current (DC), electricity only flows in one direction. AC is used to transport electricity over relatively shorter distances and DC longer ones.

ACER – Agency for the Cooperation of Energy Regulators
The European network organisation for energy regulators. It has a key role in the integration of European electricity and gas markets, providing a framework for co-operation at EU level and regulatory certainty.

ACM – Autoriteit Consument & Markt
Dutch national regulatory authority.

aFRR – automatic Frequency Restoration Reserve
aFRR is a market service that the TSO uses for balance maintenance purposes.

BNetzA – Bundesnetzagentur für Elektrizität, Gas, Telekommunikation, Post und Eisenbahnen
German national regulatory authority.

BritNed
The 260 km-long high-voltage direct current BritNed cable has a capacity of 1,000 MW and connects the Dutch and British electricity grids.

CGU – Cash-Generating Unit
A cash-generating unit is the smallest group of assets that independently generates cash flow and whose cash flow is largely independent of the cash flows generated by other assets.

CIP – Copenhagen Infrastructure Partners
Copenhagen Infrastructure Partners is a fund management company that is joined between four senior partners and PensionDenmark.

COSO – Committee of Sponsoring Organisations of the Treadway Commission
COSO has established the common internal control model against which companies and organisations assess their control systems.

CPI index
A consumer price index measures changes in the price level of a weighted average market basket of consumer goods and services purchased by households.

Cross-border TSO
A cross-border TSO is a TSO that operates in more than one country.

CSRD – Corporate Sustainability Reporting Directive
The objective of the proposed CSRD is to improve sustainability reporting and ensure it is brought into a company's management report to better leverage the potential of the European single market and to contribute to the transition to a fully sustainable and inclusive economic and financial system in line with the European Green Deal and the UN Sustainable Development Goals (SDGs).

CTA - Contractual Trust Arrangements
A contractual trust arrangement is essentially a form of company pension fund where the fund's assets have been transferred to a legal entity separate from the company.

DBO - Defined Benefit Obligation
A defined benefit obligation pension plan is a type of pension plan in which an employer/sponsor promises a specified pension payment, lump-sum or combination thereof on retirement that is predetermined by a formula based on the employee's earnings history, tenure of service and age, rather than depending directly on individual investment returns.

DC – Direct Current
In direct current (DC), the flow of electricity is only in one direction. In alternating current (AC), the electricity flows periodically reverses direction. DC is used to transport electricity over relatively longer distances and AC over shorter ones.

DSO – Distribution System Operator
A regional electricity distribution company, that is connected with end-users and is responsible for providing (1) power distribution services, by constructing and maintaining a robust high-voltage grid, and (2) facilitating a smooth functioning, liquid and stable electricity market.

E-wet – Elektriciteitswet 1998
The Dutch electricity law.

EBIT – Earnings Before Interest and Tax
Earnings for the period before income tax expense and interest payments are deducted. EBIT equals operating profit.

ECL - Expected Credit loss
Expected credit loss is the probability-weighted estimate of credit losses (i.e., the present value of all cash shortfalls) over the expected life of a Financial Instrument.

EEG – Erneuerbare-Energien-Gesetz
German Renewable Energy Act, designed to govern the preferred supply of electricity from renewable sources into the grid with guaranteed, fixed minimum producer prices. It is intended to serve and protect the climate and is one of several statutory provisions aimed at reducing Germany's dependence on fossil fuels such as oil, natural gas or coal, and nuclear power.

EIB – European Investment Bank
The European Investment Bank is one of the key financial institutions of the EU. It is the only bank owned by and representing the interests of the EU member states, providing financing for sustainable investment projects that contribute to furthering EU policy objectives.

EIR - Effective Interest Rate
The effective interest rate is the interest rate on a loan or financial product restated from the nominal interest rate and expressed as the equivalent interest rate if compound interest was payable annually in arrears.

EMTN – Euro Medium-Term Note
A flexible medium-term debt instrument that is issued directly to the market with different maturities and is offered continuously rather than all at once like a bond issue.

ENTSO-E – European Network of Transmission System Operators for Electricity
ENTSO-E is the organisation of transmission system operators at a European level, representing 39 TSOs from 35 countries. Its mission is to promote important aspects of energy policy, especially integrating renewable energy and the completion of an internal energy market.

EnWG – Energiewirtschaftsgesetz
The German electricity law.

Gasunie – N.V. Nederlandse Gasunie
Gasunie is a European gas infrastructure company that transports natural gas and green gas in the Netherlands and the northern part of Germany. Gasunie is participating in the development of the North Sea Wind Power Hub.

GIS – Gas Insulated Switchgear
A switchgear insulated via SF_6 gas or other gasses

Green (Hybrid) Bonds
The proceeds of the green bonds are used to finance, refinance and/or invest in projects relating to the transmission of renewable electricity from offshore wind power plants into the onshore electricity grid using direct current technology or alternating current technology. Green hybrid bonds are perpetual bonds without an end-date.

Helaba – Helaba Pension Trust e.V.
Helaba Pension Trust e.V. is a subsidiary of German bank Landesbank Hessen-Thüringen and holds a part of the assets of the German pension plan.

HGRT – Holding des Gestionnaires de Réseaux de Transport d'Électricité S.A.S.
Holding des Gestionnaires de Réseaux de Transport d'Électricité S.A.S. is a holding company of EPEX SPOT power exchange.

HVDC – High-Voltage Direct Current
A high-voltage, direct current system can transmit bulk electricity over longer distances than an alternating current system and with lower grid losses. As such, HVDC is used for linking offshore wind farms to the onshore grid and for our Interconnectors NorNed to Norway, BritNed to the UK and COBRAcable to Denmark and NordLink to Norway.

IAS - International Accounting Standards
International Accounting Standards (IAS) are older accounting standards issued by the International Accounting Standards Board (IASB), an independent international standard-setting body based in London. The IAS were replaced in 2001 by International Financial Reporting Standards (IFRS).

IASB - International Accounting Standards Board
The International Accounting Standards Board is the independent accounting standard-setting body of the IFRS Foundation, which is the successor to the International Accounting Standards Committee.

IFRIC - International Financial Reporting Interpretations Committee
IFRIC Interpretations are developed by the IFRS Interpretations Committee (previously the International Financial Reporting Interpretations Committee, IFRIC) and are issued after approval by the International Accounting Standards Board (IASB).

IFRS Accounting Standards – International Financial Reporting Standards
The internationally prescribed and recognised reporting guidelines and accounting standards as endorsed by the European Union (EU).

IIRC – International Integrated Reporting Council
The International Integrated Reporting Council (IIRC) is a global coalition of regulators, investors, companies, standard setters, the accounting profession, academia and NGOs. The coalition promotes communication about value creation as the next step in the evolution of corporate reporting. Together with the Sustainability Accounting Standards Board (SASB) the IIRC formed the Value Reporting Foundation.

KfW IPEX-Bank GmbH (KFW)– Kreditanstalt für Wiederaufbau
KfW is the Reconstruction Credit Institute development bank owned by the German government

KWK-G – Kraft-Wärme-Kopplungs-Gesetz
The German Combined Heat and Power Act.

LoR – Letter of Representation
A letter of representation is signed by management of the Group and/or performance unit to attest to the accuracy of the financial statements.

Moody's
Moody's Investors Service provides credit ratings, research, and risk analysis.

Net Debt
Gross debt minus cash and cash equivalents at free disposal plus lease liabilities plus net employee defined benefit obligation plus 50% of hybrid securities.

Netbeheer Nederland
Netbeheer Nederland is the association in the energy sector representing the interests of national and regional electricity and gas network operators in the Netherlands.

NOKA – DC Nordseekabel GmbH & Co. KG
NOKA is jointly owned by TenneT and German development bank KfW. It is responsible for financing and building the German part of the NordLink cable.

NordLink
TenneT is jointly developing the NordLink interconnector with its project partners, the Norwegian TSO Statnett and German development bank KfW. With an overall transmission capacity of 1,400 MW, the subsea cable will run between Tonstad in the South of Norway and Wilster in Northern German.

OECD – Organisation for Economic Co-operation and Development
The Organisation for Economic Co-operation and Development is an intergovernmental economic organisation with 36 member countries, founded in 1961 to stimulate economic progress and world trade.

Pillar Two
Pillar Two is a tax law adopted by the European Union (and also adopted in national legislation) effective as of 1 January 2024, and aims to ensure that income of large groups with a turnover of more than a certain threshold is taxed at an appropriate rate. In short, it ensures a minimum effective tax rate ('ETR') of 15% for the whole group. In case the ETR of a group in any jurisdiction is below the minimum rate of 15%, the rules require that a top-up tax is to be levied.

RCF – Revolving Credit Facility
A line of credit where TenneT pays a commitment fee and can then use the funds as and when needed.

ROIC – Return on Invested Capital
Underlying EBIT Group expressed as a percentage of the average underlying invested equity plus loans and bank overdrafts minus cash at free disposal during the year.

S&P – Standard & Poors
Standard & Poors provides credit ratings, research, and risk analysis.

SAIDI - System Average Interruption Duration Index
The average outage duration for each customer served

SASB – Sustainability Accounting Standards Board
The Sustainability Accounting Standards Board is a non-profit organisation that sets financial reporting standards. SASB was founded in 2011 to develop and disseminate sustainability accounting standards. Together with the IIRC, the SASB formed the Value Reporting Foundation.

SBTi – Science Based Targets initiative
The SBTi is a partnership between CDP (Carbon Disclosure Project), the United Nations Global Compact, World Resources Institute (WRI) and the World Wide Fund for Nature (WWF). The SBTi call to action is one of the We Mean Business Coalition commitments.

SDG – United Nations Sustainable Development Goals
The Sustainable Development Goals (SDGs) are a universal call to action to end poverty, protect the planet and improve the lives and prospects of everyone, everywhere. The 17 aspirational 'global goals' with 169 targets between them were adopted by all UN Member States in 2015, as part of the 2030 Agenda for Sustainable Development which set out a 15-year plan to achieve the Goals.

SF_6 – Sulphur Hexafluoride
An inorganic, colourless, odourless and non-flammable greenhouse gas that is used in the electricity industry to insulate high-voltage circuit breakers, switchgear and other electrical equipment.

SuedLink
A DC connection to transport electricity generated in the north of Germany to the South.

SuedOstLink
A DC connection to transport electricity generated in north of Germany to the South-East.

TRIR – Total Recordable Incident Rate
The total recordable incident rate is the number of total recordable incidents per million hours worked. Recordable incidents are fatalities, lost work day cases, restricted work day cases and medical treatment cases.

TSCNET
TSCNET Services is one of Europe's Regional Security Coordinators (RSCs). The company based in Munich, renders integrated services for power transmission system operators (TSOs) and their control centres to maintain the operational security of our electricity system – 24 hours a day, seven days a week.

TSO – Transmission System Operator
A transmission system operator transports electricity at national or regional level from producers to distributors. A TSO is responsible for providing (1) power transmission services, by constructing and maintaining a robust high-voltage grid, (2) system services, by maintaining the balance between supply and demand of electricity 24/7 and (3) facilitating a smooth functioning, liquid and stable electricity market.

UNGC – United Nations Global Compact
A call from the UN to companies to align strategies and operations with universal principles on human rights, labour, environment and anti-corruption, and take actions that advance societal goals.

VKE – Versorgungskasse Energie VVaG
Versorgugnskasse Energie VVaG is pension fund for energy mutuals and a subsidiary of E.ON SE. It holds a part of the assets of the German pension plan.

WACC – Weighted Average Cost of Capital
The WACC is the rate that a company is expected to pay on average to all its capital providers to finance its assets.

Workforce
All internal and external people who works for TenneT and where TenneT is responsible for their safety relating to our work.

Colophon

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Please send an email.

Disclaimer

`We´, `TenneT´, `TenneT Holding´, `the Group´, `the company´ or similar expressions are used in this report as a synonym for TenneT Holding B.V. and its subsidiaries.

Parts of this report contain forward-looking information. These parts may include unqualified statements on future operating results, government measures, the impact of other regulatory measures on the activities of TenneT as a whole, TenneT´s shares and those of its subsidiaries and joint-ventures in existing and new markets, industrial and macro-economic trends and TenneT´s performance in these. Such statements are preceded or followed by or contain words such as `believes´, `expects´, `anticipates´ or similar expressions. These forward-looking statements are based on current assumptions concerning future activities and are subject to known and unknown factors, and other uncertainties, many of which are beyond TenneT´s control, so that future actual results may differ significantly from these statements.

All financial information in this Integrated Annual Report is reported in millions of euro, unless stated otherwise. As a result, small rounding differences may occur.

TenneT is a leading European grid operator. We are committed to providing a secure and reliable supply of electricity 24 hours a day, 365 days a year, while helping to drive the energy transition in our pursuit of a brighter energy future – more sustainable, reliable and affordable. In our role as cross-border Transmission System Operator (TSO) we design, build, maintain and operate over 25,000 kilometres of high-voltage electricity grid in the Netherlands and large parts of Germany, and facilitate the European energy market through our 17 interconnectors to neighbouring countries. We are one of the largest investors in national and international onshore and offshore electricity grids, with an underlying revenue of EUR 8.4 billion and a total underlying asset value of EUR 55 billion. Every day our 9,700 people are highly motivated to ensure that the supply and demand of electricity is balanced and always available for over 43 million people.

Lighting the way ahead together.

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