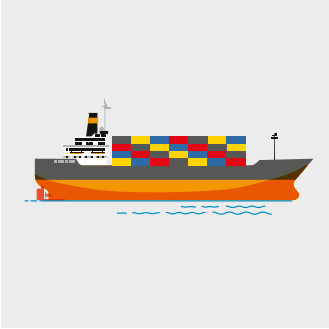
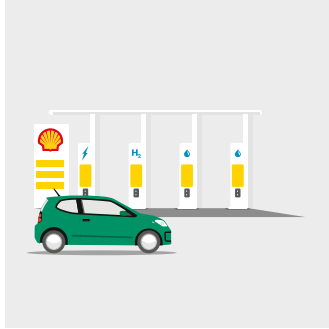
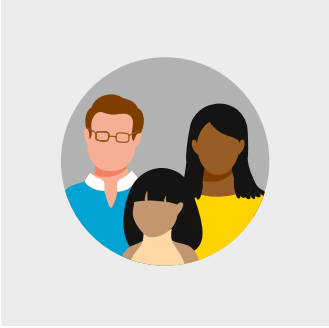
GENERATING
SHAREHOLDER VALUE



ACHIEVING
NET-ZERO EMISSIONS

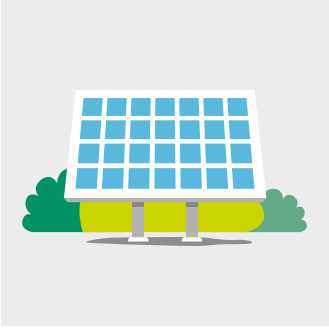


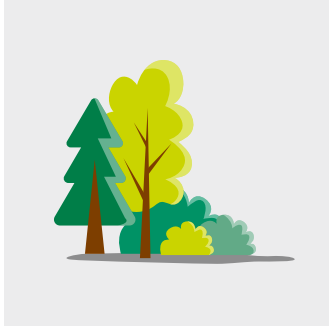
RESPONSIBLE **ENERGY**



POWERING
LIVES

Shell plc
Sustainability
Report 2021





RESPECTING
NATURE

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Design and production:
Friend www.friendstudio.com

Implementation: nexxar www.nexxar.com

Read the Shell Sustainability Report online at www.shell.com/sustainabilityreport or download our app:

Digital
The Sustainability Report is published in an online version at reports.shell.com. The online version includes additional information, such as an interactive GRI index to enhance usability for the reader. In the event of any discrepancy between the online and hardcopy versions, the information contained in the online report prevails. This hardcopy version is provided for the reader's convenience only.

Imagery
Photos used may have been taken prior to imposition of restrictions related to the COVID-19 pandemic and/or reflect the restrictions of the location where the photo was taken.

We are transforming several of our refineries into energy and chemicals parks.

SUSTAINABILITY AT SHELL

Welcome to the Shell Sustainability Report, which covers our social, safety and environmental performance in 2021. It also sets out our strategy to accelerate the transition of our business to net-zero emissions.

02 LETTER FROM THE CEO
04 POWERING PROGRESS
05 OUR APPROACH TO SUSTAINABILITY
08 ABOUT THIS REPORT

LETTER FROM THE CEO

Ben van Beurden, Chief Executive Officer

Early 2022 has brought new uncertainties and challenges, and, like so many others, I am horrified by the war in Ukraine. I feel deeply for those suffering no matter where they are. All of us at Shell are concerned about our staff and contractors affected by the conflict and we are doing everything we can to help them. Shell is helping in the relief effort and working with governments to find ways to secure energy supplies for Europe and other markets.

We also took decisive actions in support of global economic measures against Russia and you can read about them in the media release.

As the world faces these new challenges, and even as the COVID-19 pandemic continues, it must not lose sight of the importance of taking action on climate change.

Our Powering Progress strategy, which we launched in 2021, sets out how Shell can play a leading role in helping the world to reduce its carbon emissions. At the heart of our strategy lies our own target to become a net-zero emissions energy business by 2050, in step with society's progress in achieving the Paris climate goals.

In this, our 25th Sustainability Report, we share how we are working towards our Powering Progress goals.

SAFETY IS ESSENTIAL

One critical area in which we simply must do better is safety, which is essential to our strategy. We have made progress on improving the safety of our operations since the early 2000s.

We have not been able to eliminate all fatal incidents involving Shell employees and contractors. The number of safety incidents increased in 2021. I am saddened by the deaths of eight of our contractor colleagues in Pakistan, Indonesia and Nigeria, and the death of a government security agent in Nigeria. We must strive continuously to improve our efforts to keep people safe.

ACCELERATING TOWARDS NET ZERO

In 2021, we took an important step towards becoming a net-zero emissions business with a new target to reduce our absolute emissions from our operations (Scope 1 and Scope 2) by 50% by 2030, compared with 2016 levels on a net basis. By the end of 2021, Shell had reduced Scope 1 and 2 emissions from our operations, and from the energy we buy to run our operations, by 18% from 83 million tonnes in 2016 to 68 million tonnes.

We also achieved our first short-term target of a 2-3% reduction in net carbon intensity (NCI) by the end of 2021. Shell's NCI in 2021 was 77 gCO_2e/MJ which was a 2.5% reduction from the 2016 reference year.

We are also working with our customers and across sectors to help them find their own pathways to achieve net-zero emissions. This will help grow demand for new low-carbon products.

But Powering Progress goes beyond achieving our net-zero targets. In 2021, we started incorporating new ambitions within our business to respect the environment and to power people's lives.

We also continued to support the UN Global Compact's corporate governance principles on human rights, environmental protection, anti-corruption and better labour practices.

RESPECTING NATURE

In this report, we have set out our commitments on biodiversity, water, and on helping to create a circular economy and reduce waste.

It is also of the utmost importance that we continue to work to prevent oil spills. In 2021, we reduced the number of operational spills of more than 100 kilograms by 40%, compared with 2020. However, in Nigeria, spills caused by oil theft and sabotage of pipelines continued amid heightened security risks. We are dealing with these challenges and the impact they have on the environment, on local communities and on our business.

CONTRIBUTING TO COUNTRIES AND COMMUNITIES

We are working with our suppliers to find ways to reduce greenhouse gas emissions across our supply chains. In 2021, we rolled out a new digital platform which enables our suppliers to track performance on emissions reduction, share best practice and exchange emissions data with their own supply chains.

The supply of affordable, reliable and sustainable energy is crucial for raising living standards and for addressing other global challenges, including inequality. In 2021, we continued to develop social investment programmes to improve access to energy in Ethiopia, Mozambique, Pakistan and South Africa.

In closing, I would like to thank the members of the independent Report Review Panel, who help us provide balanced and relevant reporting. We have made the report more concise this year to make it easier for readers to understand our performance. Each section guides you to our shell.com global website, where updates will keep you informed about our sustainability performance throughout the year. This report sits with the Annual Report and the Energy Transition Report, which also provide information on our sustainability performance.

Sustainability is always a work in progress. Shell has goals to lower our carbon emissions, respect nature and contribute positively to people's lives. This report shows what we have achieved – and where we need to do better.

Ben van Beurden
Chief Executive Officer

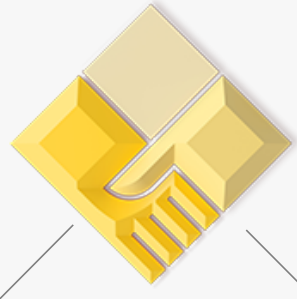
More in this report Sustainability at Shell | Climate change and the energy transition | Our approach to respecting nature | Providing access to energy
More on Shell websites Our strategy: Powering Progress

POWERING PROGRESS

OUR STRATEGY

POWERING **PROGRESS**

Our strategy to accelerate the transition to net-zero emissions, purposefully and profitably

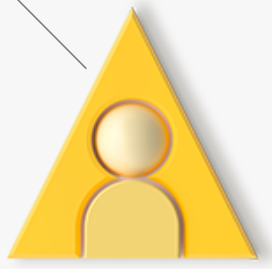


GENERATING **SHAREHOLDER VALUE**

Growing value through a dynamic portfolio and disciplined capital allocation

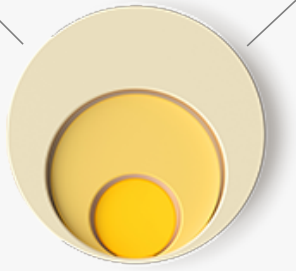
RESPECTING **NATURE**

Protecting the environment, reducing waste and making a positive contribution to biodiversity



POWERING **LIVES**

Powering lives through our products and activities, and supporting an inclusive society



ACHIEVING **NET-ZERO EMISSIONS**

Working with our customers and sectors to accelerate the energy transition to net-zero emissions

UNDERPINNED BY OUR **CORE VALUES** AND OUR FOCUS ON **SAFETY**

More in this report Letter from the CEO | Sustainability at Shell | Sustainability governance | Performance overview
More on Shell websites Our strategy: Powering Progress

OUR APPROACH TO SUSTAINABILITY

SUSTAINABILITY AT SHELL

Powering Progress is our strategy to accelerate the transition of our business to net-zero emissions, in step with society, purposefully and profitably. It is designed to create value for our shareholders, customers and wider society, and integrates our long-standing commitment to contribute to sustainable development with our business strategy.

We aim to provide more and cleaner energy solutions in a responsible manner – in a way that balances short- and long-term interests, and that integrates our economic, environmental and social commitments and targets.

Powering Progress, launched in 2021, has four main goals in support of our purpose – to power progress together by providing more and cleaner energy solutions:

- Generating shareholder value: growing value through a dynamic portfolio and disciplined capital allocation;
- Achieving net-zero emissions in step with society: working with our customers and across sectors to accelerate the transition to net-zero emissions;
- Powering lives: powering lives through our products and activities, and by supporting an inclusive society; and
- Respecting nature: protecting the environment, reducing waste and making a positive contribution to biodiversity.

Powering Progress is underpinned by our core values of honesty, integrity and respect for people and our focus on safety.

Read more about what sustainability means at Shell at www.shell.com/sustainability/our-approach/sustainability-at-shell and more about our strategy at www.shell.com/powering-progress.

UN Sustainable Development Goals

We will play our part in helping governments and societies achieve the UN's 17 Sustainable Development Goals (SDGs). The goals were one of the considerations in the development of our Powering Progress strategy. The actions we take as part of our Powering Progress strategy can help directly contribute to 13 of the SDGs, while indirectly contributing to others.

Information on how we are contributing to these SDGs can be found throughout this report and at www.shell.com/sdgs.

More in this report Climate change and the energy transition | Our Powering Progress targets | Sustainability governance | Performance overview

More on Shell websites Our strategy: Powering Progress | What sustainability means at Shell | Commitments, policies and standards | UN Sustainable Development Goals

SUSTAINABILITY GOVERNANCE

We have clear and effective governance structures throughout Shell, along with performance standards and other controls. These include the Shell General Business Principles, our Code of Conduct, and our Health, Safety, Security, Environment and Social Performance (HSSE & SP) Control Framework. They influence the decisions made and actions taken across Shell.

The Safety, Environment and Sustainability Committee (SESCo) is one of four standing committees of the Board of Directors of Shell plc. The overall role of SESCo is to review the practices and performance of Shell, primarily with respect to safety, environment including climate change, and sustainability.

In February 2022, Shell announced the new role of Strategy, Sustainability and Corporate Relations Director. The new director is a member of Shell's Executive Committee.

Read more about SESCo and how Shell manages sustainability at www.shell.com/sustainability/our-approach/governance and in our Annual Report.

More in this report Climate change and the energy transition | Our approach to safety | Energy transition | Our approach to respecting nature

More on Shell websites Our strategy: Powering Progress | Board of Directors | Sustainability Governance

PERFORMANCE OVERVIEW

PERFORMANCE IN 2021

6.9
serious injuries and fatalities per 100 million working hours, compared with 6.0 in 2020. See Our approach to safety

77 gCO_2e/MJ
net carbon intensity, which measures the life-cycle emissions intensity of the portfolio of energy products sold. See Delivering our climate targets

18%
reduction in our total combined Scope 1 and 2 absolute greenhouse gas emissions compared with 2016, the base year. [A] See Delivering our climate targets

102
operational process safety Tier 1 and 2 events, compared with 103 in 2020. See Process safety

9.1 billion
litres of biofuels went into Shell's petrol and diesel worldwide [B]. See Biofuels

87,000
public and private electric vehicle charge points operated by Shell. See Electric vehicle charging

2,444
enhanced screenings for higher-risk contracts, to check for potential legal or regulatory integrity-related red flags. See Ethical leadership

40%
decrease in the number of operational spills of more than 100 kilograms. There were 41 in 2021 compared with 70 in 2020. See Spills

18%
increase in flaring. Overall flaring increased to 4.5 million tonnes of carbon dioxide equivalent (CO_2e) compared with 3.8 million tonnes in 2020. See Flaring

$37.5 billion
spent on goods and services from around 24,000 suppliers globally. See Supply chain

29.5%
women in senior leadership positions. See Diversity, equity and inclusion

$94 million
spent on voluntary social investment. See Social investment

$4.2 billion
spent in countries where gross domestic product is less than $15,000 a year per person. [C] See Local content

271,000
formal training days for employees and joint venture partners. See Diversity, equity and inclusion

60,000
students participated in NXplorers, our flagship STEM programme. See STEM education

[A] From assets and activities under our operational control.
[B] Including 3.2 billion litres through our joint venture Raízen on an equity basis.
[C] According to the UN Development Programme's Human Development Index 2019.

More in this report Climate change and the energy transition | Letter from the CEO | Our Powering Progress targets
More on Shell websites Powering Progress – transitioning to net-zero emissions

REMUNERATION

POWERING **PROGRESS**

In 2021, we linked the pay of more than 16,500 staff to our target to reduce the carbon intensity of our energy products by 6-8% by 2023, compared with 2016.

Driving action through remuneration

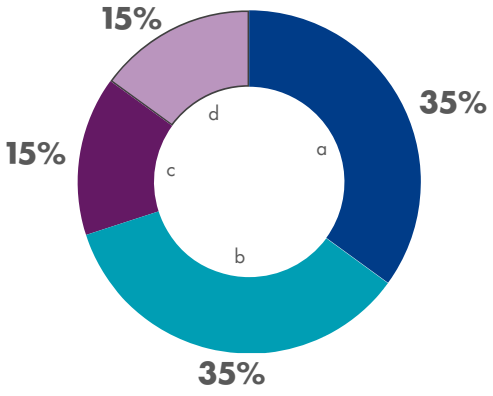
Progress in the energy transition key performance indicators was considered as part of the 2021 annual bonus scorecard (15% weighting) applying to almost all of Shell's employees, as well as the 2021 Performance Share Plan awards (10% weighting) for around 16,500 employees and the 2021 Long-term Incentive Plan awards (20% weighting) for senior executives. The 2021 annual bonus scorecard also included a 15% weighting based on safety performance.

From 2022, we will widen the scope of the progress in the energy transition measure on the annual bonus scorecard, to be based on three key themes: selling lower-carbon products, reducing our emissions and partnering to decarbonise. To emphasise the importance of becoming increasingly customer-led, we will also introduce a new customer excellence measure under operational excellence. In the 2022 Long-term Incentive Plan, we have further refined the energy transition performance condition to avoid duplication of the measures incorporated into the scorecard.

Read more about remuneration in the 2021 Annual Report.

ANNUAL BONUS SCORECARD ARCHITECTURE 2022

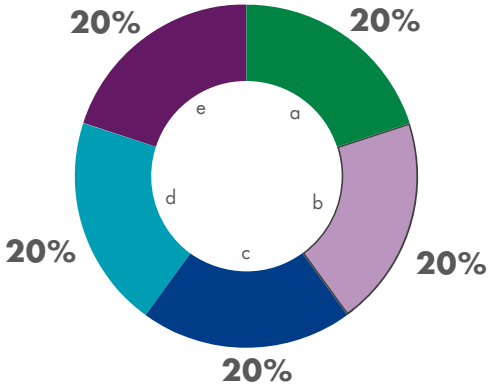
percentage



a **Cash flow from operations**
b **Operational excellence** (Asset management excellence 15%, project delivery excellence 10%, customer excellence 10%)
c **Progress in the energy transition** (Selling no/low-carbon products 5%, operational emissions reduction 5%, partnering to decarbonise 5%)
d **Safety** (SIF-F 7.5%, Tier 1 and 2 process safety 7.5%)

LONG-TERM INCENTIVE PLAN PERFORMANCE CONDITIONS

percentage



a Total shareholder return
b Return on average capital employed
c Cash flow from operations
d Free cash flow
e Energy transition

More in this report Climate change and the energy transition | Energy transition | Delivering our climate targets
More on Shell websites Our strategy: Powering Progress | Leadership | Corporate governance

ABOUT THIS REPORT

SELECTING THE TOPICS

The 2021 Sustainability Report, published on April 5, 2022, is our 25th such report. It details our social, safety and environmental performance in 2021.

Each year we use a structured process to select the report's content. We engage with various groups and individuals to understand specific concerns about our business and its impact, particularly relating to the environment and society. We consider the views of others such as non-governmental organisations, customers, the media, academics, investors and employees.

Input from our Report Review Panel of independent experts helps to ensure that coverage is balanced, relevant and complete.

Read more about our topic selection process at www.shell.com/sustainability/transparency-and-sustainability-reporting/sustainability-reports.

Reporting guidelines

We report in line with guidelines developed by IPIECA, the global oil and gas industry association for advancing environmental and social performance. This report has been prepared in accordance with the Global Reporting Initiative (GRI) Standards: Core option (see GRI index for full details). It is also the document we use to communicate our progress in supporting the principles of the UN Global Compact.

As a member of the World Business Council for Sustainable Development, we support the organisation's updated criteria for membership from 2022, which includes requirements for corporate transparency.

The recommendations of the Task Force on Climate-related Financial Disclosures (TCFD) help to guide and inform our reporting in our Annual Report.

In January 2021, we agreed to adopt the Stakeholder Capitalism Metrics, a set of environmental, social and governance metrics released by the World Economic Forum and its International Business Council.

More detailed information about how we report is available at www.shell.com/sustainability/sustainability-reporting-and-performance-data/voluntary-reporting-standards-and-esg-ratings.

More in this report Sustainability at Shell | About our data | Our standards and policies | GRI table

More on Shell websites Our strategy: Powering Progress | Voluntary reporting standards and ESG ratings

REPORT REVIEW PANEL

We use an external review panel to strengthen our sustainability reporting. The panel helps evaluate and improve the quality and credibility of our Sustainability Report. The 2021 Report Review Panel comprised five sustainability and corporate reporting experts:

- Mandy Kirby, UK. Chief Strategist and Co-founder, City Hive (Chair of the Report Review Panel)
- Hilary Parsons, UK. Formerly Head of Creating Shared Value Engagement, Nestlé
- Vanessa Zimmerman, Australia. Chief Executive Officer, Pillar Two
- Renard Siew, Malaysia. Adviser on Climate Change, Centre of Governance and Political Studies
- Elizabeth White, USA. Strategist and Global Head Environment and Social Sustainability, Sector Economics and Impact, IFC World Bank Group.

The panel provided input into our topic selection process. Panel members reviewed the report, discussed Shell's reporting and spoke to relevant Shell employees before preparing their statement. The panel's mandate focused on the quality of Shell's reporting, including credibility, completeness and responsiveness. The panel is not accountable for reviewing the data in the report or material on shell.com outside the bounds of this report. Panel members are offered an honorarium for their input.

Find out more about the panel at www.shell.com/sustainability-report-review-panel.

Report Review Panel recommendations

The panel has had the opportunity to review two drafts of the 2021 Sustainability Report and provided both written and verbal feedback to Shell. During this process, Shell has considered our feedback in relation to the quality of sustainability reporting, particularly regarding content and presentation of information.

The panel notes that while the report is situated within the wider shell.com suite of information, the panel has not reviewed content on the website, nor is this part of its remit.

The panel notes that Shell has undertaken significant changes to its approach in the Sustainability Report that reflect a shift in how different stakeholders access information. We welcome the clear movement towards the inclusion of more sustainability-related data within the Annual Report as a signal that it is business-critical and strategic information. We also note that the Sustainability Report has been designed to support stakeholders who wish to access sustainability data. More qualitative content and relevant information material to the organisation, which was previously included in the report, now sits on the main website.

While understanding the evolution of reporting, we note the importance of ensuring that readers who wish to engage further on a topic are directed to the website to find up-to-date and relevant information.

We encourage Shell to think particularly about providing context to sections in which data are presented. Such context would help readers interpret the quantitative information in the report. In addition, we suggest paying special attention to the presentation of visual, tabular and graphic information. These are all useful instruments to convey complex information as long as they are accessible to lay readers, for example by providing relevant comparative elements, benchmarks and signposts to significant data points.

There are areas of disclosure that we welcome particularly, including continued efforts on tax transparency, supplier conduct and compliance, as well as confirming where activities such as Arctic Circle activity will not take place, as well as where they could.

Language in some areas has become more precise and aligned to relevant international standards and external expectations. For example, Shell now uses the term net carbon intensity in relation to measuring progress against net-zero emissions targets.

Looking ahead to the 2022 report, the panel would encourage Shell to:

- Provide clear context for data that are presented;
- Sufficiently explain how Shell plans to reach its targets;
- Depict progress against targets over time;
- Strengthen the human rights section with more explicit information about engaging with suppliers and other business partners, including joint-venture partners, to explain how human rights impacts throughout the value chain are being addressed in line with core international standards;
- Clearly explain what topics are material for Shell;
- Provide data assurance for sustainability topics beyond climate;
- Draw more connections between different ESG issues [including climate and human rights]; and
- Present more reflections on challenges that may have occurred during the year including steps it is taking to respond to litigation, advocacy campaigns or other incidents as appropriate and taking into account external stakeholders' expectations.

More in this report Sustainability at Shell | About our data | Our standards and policies | GRI table
More on Shell websites Our strategy: Powering Progress | Voluntary reporting standards and ESG ratings

Safety is central to our Powering Progress strategy.

LIVING BY OUR CORE VALUES

Our Powering Progress strategy is underpinned by our core values of honesty, integrity and respect for people, and our focus on safety. This includes our commitment to doing business in an ethical and transparent way.

11 BUSINESS ETHICS AND TRANSPARENCY
14 SAFETY

BUSINESS ETHICS AND TRANSPARENCY

ETHICAL LEADERSHIP

POWERING **PROGRESS**

Powering Progress is underpinned by our core values of honesty, integrity and respect for people and our focus on safety. These include our commitment to doing business in an ethical and transparent way.

Our core values of honesty, integrity and respect for people underpin our work with employees, customers, investors, contractors, suppliers, non-governmental organisations (NGOs) and others. The Shell General Business Principles set out our core values, our responsibilities and the principles and behaviours that guide how we do business.

Code of Conduct

Shell employees, contractors and third parties can report any potential breaches of the Code of Conduct confidentially through several channels, including anonymously through a global helpline, operated by an independent provider. The three most frequent categories of alleged Code of Conduct breaches raised via the Shell Global Helpline in 2021 related to harassment, conflicts of interest and protection of assets. We maintain a stringent no retaliation policy to protect any person making an allegation in good faith.

Anti-bribery and corruption

Shell has rules on anti-bribery and corruption in our Code of Conduct and Ethics and Compliance Manual. Contractors and consultants are also required to act consistently with our Code of Conduct when working on our behalf.

Shell has around 24,000 suppliers worldwide (see Supply chain). Although our largest suppliers often have their own anti-bribery and corruption training programmes, smaller companies may lack the resources. We offer free training in anti-bribery and anti-corruption practices to selected suppliers and contractors. This training is offered in 14 languages. By the end of 2021, we had offered training to more than 1,300 third parties in 16 countries.

Read more at www.shell.com/sustainability/transparency-and-sustainability-reporting/transparency-and-anti-corruption.

Protecting personal data

Shell respects the privacy of individuals and recognises that personal data belong to the individual. We take action to manage personal data in a professional, lawful and ethical way.

Shell is subjected to frequent cyber-security attacks. We regularly monitor our IT systems for possible vulnerabilities. Our incident-handling process helps to ensure that we deal effectively with an issue.

IN 2021 THERE WERE:

1,479
reports to the Shell Global Helpline

181
confirmed breaches of the Code of Conduct

244
employees or contractor staff subject to disciplinary action

67
people dismissed

6.7
million counterparties screened for trade compliance, anti-bribery, anti-corruption and anti-money laundering on an ongoing basis

2,444
enhanced pre-screenings for higher-risk contracts

Read more about how we do business and ethical leadership at www.shell.com/sustainability/our-approach/commitments-policies-and-standards/business-integrity and www.shell.com/values and www.shell.com/shell-ethics-and-compliance-manual.

More in this report Letter from the CEO | Working with our suppliers | Collaborations and stakeholder engagement | Tax transparency
More on Shell websites Our strategy: Powering Progress | Code of Ethics | Our Values

COLLABORATIONS AND STAKEHOLDER ENGAGEMENT

We work with governments, non-governmental organisations (NGOs), industry bodies, academic institutions, national oil and gas companies and other businesses. We do this in compliance with antitrust rules and regulations. These collaborations range from working together on a project to sponsoring a particular group. These efforts help us learn, share best practice, achieve specific objectives, set future goals and build trust with our stakeholders.

Read more about collaborations and stakeholder engagement at www.shell.com/sustainability/our-approach/working-in-partnership.

More in this report Letter from the CEO | Protecting biodiversity | Social investment
More on Shell websites Our strategy: Powering Progress | External voluntary codes | Human rights

POLITICAL ENGAGEMENT

Shell engages with governments, regulators and policymakers to help shape comprehensive policy, legislation and regulation. We advocate our positions on matters which affect us, our employees, customers, shareholders or local communities, in accordance with our values and the Shell General Business Principles.

In the European Union (EU) and the USA, we report expenditure associated with our lobbying activities in line with the requirements and guidelines set out in the EU Transparency Register and the US Lobbying Disclosure Act, respectively. There are different rules for which costs should be reported in these two submissions and we are required to comply with the appropriate requirements for each jurisdiction. These submissions are publicly available:

- In the EU, Shell's reported estimated annual costs related to activities covered by the register were €4,000,000 to €4,499,999 in 2021.
- In the USA, Shell's reported expenses related to lobbying practices were $7,080,000 in 2021.

Read more about corporate political engagement and positions on key public issues, such as climate change and energy transition, at www.shell.com/advocacy.

More in this report Letter from the CEO | Tax transparency
More on Shell websites Powering Progress – transitioning to net-zero emissions | Advocacy and political activity | Payments to governments

TAX TRANSPARENCY

Our tax strategy is designed to support Shell in delivering our Powering Progress strategy through our commitment to transparency, compliance and open dialogue with our stakeholders, from governments to civil society. Our strategy and actions reflect our values and principles.

Tax revenues enable governments to pay for public services, such as education, health care and transport. In 2021, Shell paid $58.7 billion to governments. We paid $6.0 billion in corporate income taxes and $6.6 billion in government royalties, and collected $46.1 billion in excise duties, sales taxes and similar levies on our fuel and other products on behalf of governments.

We also made other payments to governments, including $10.5 billion in production entitlements, $2.1 billion in fees and $149 million in bonuses.

Shell publishes a Tax Contribution Report annually which sets out the corporate income tax that Shell companies paid in countries and locations where they have a taxable presence. Our latest Tax Contribution Report includes, for the first time, a breakdown of our total tax contribution in five countries where we have key business activities. These countries are: India, the Netherlands, Nigeria, the UK, and the USA. This breakdown includes the taxes we pay as an employer, such as social security payments, and the taxes we collect from our employees on behalf of governments.

We regularly engage with policymakers to support the development of tax rules and regulations based on sound tax policy principles. In this way, we hope to contribute to the development of fair, effective and stable tax systems. We also provide constructive input to industry groups and international organisations, such as the Extractive Industries Transparency Initiative (EITI), the B Team Responsible Tax Working Group (B Team) and the international business network Business at OECD.

Read more about our approach to tax at www.shell.com/sustainability/transparency-and-sustainability-reporting/shells-approach-to-tax. Read our latest Tax Contribution Report at reports.shell.com/tax-contribution-report/2020/ and our Payments to Governments report at www.shell.com/payments.

More in this report Political engagement

More on Shell websites Powering Progress – transitioning to net-zero emissions | Tax Contribution Report 2020 | Shell's approach to tax | Payments to governments

SAFETY

OUR APPROACH TO SAFETY

POWERING **PROGRESS**

Powering Progress is underpinned by our core values of honesty, integrity and respect for people and our focus on safety.

Safety is central to our Powering Progress strategy. We aim to do no harm to people and to have no leaks across our operations. We call this our Goal Zero ambition.

In 2021, we began to move from the Shell Life-Saving Rules, which were in place for more than a decade, to the International Association of Oil & Gas Producers (IOGP) Life-Saving Rules. This is an important step in our refreshed approach to safety. By the end of 2021, more than 100,000 of our employees and contractors had completed the mandatory training on the new Life-Saving Rules. The new rules came into effect from January 2022.

Read more about our approach to safety at www.shell.com/sustainability/safety/our-approach.

Personal safety

The number of safety incidents increased in 2021, after steady improvements in reducing these over the last few years.

Eight of our contractor colleagues lost their lives in the course of their work on Shell-operated venture activities in 2021. We feel these losses deeply. We are determined to learn from these incidents and spread the lessons from them throughout our organisation so we can help prevent anything similar recurring.

Six people working for a contractor were killed when gunmen attacked a convoy of buses travelling to the Assa North Gas development project site in Nigeria. A government security agent was also killed in the incident and seven other people were injured. Shell Petroleum Development Company of Nigeria Limited (SPDC), in its capacity as operator of the SPDC joint venture (Shell interest 30%), supported the contractor during the emergency response and the investigation of the incident.

In Pakistan a contractor died at a service station operated as a franchise after a flash fire that occurred when a product was being delivered to the site. Two other people were injured in the fire.

In Indonesia, a contractor died after being injured when a wall collapsed during demolition work at a service station. Three other people were also injured.

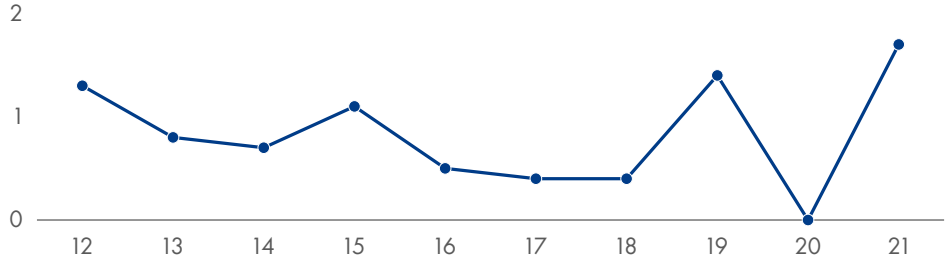
At Shell, we work closely with our contractors to help build a strong safety culture at the frontline.

Read about how we work with our contractors at www.shell.com/sustainability/safety/our-approach.

Fatal accident rate (FAR)

FATAL ACCIDENT RATE (FAR)

Number per 100 million hours



Our fatal accident rate – the number of fatalities per 100 million working hours in our operated ventures – increased to 1.7 in 2021 compared with zero in 2020.

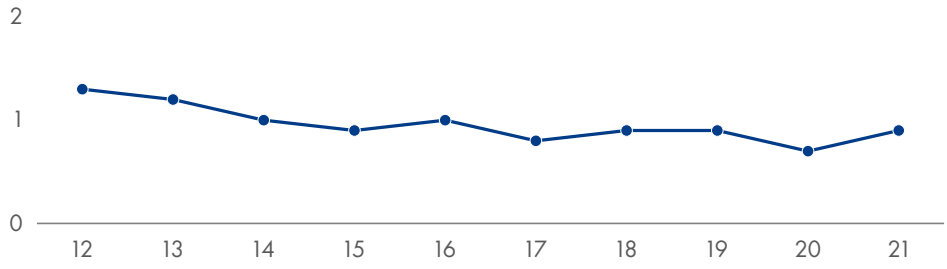
Serious injuries and fatalities frequency (SIF-F)

To strengthen our efforts to protect people from harm, we now measure the number of serious injuries and fatalities per 100 million working hours. This allows us to focus our efforts to prevent serious injuries and fatalities on the most critical events. In 2021, the number of serious injuries and fatalities per 100 million working hours (SIF-F) was 6.9, compared with 6.0 in 2020.

Total recordable case frequency (TRCF)

TOTAL RECORDABLE CASE FREQUENCY (TRCF)

Number per million hours



In 2021, the number of injuries per million working hours – the total recordable case frequency (TRCF) – was 0.9, compared with 0.7 in 2020.

Shell's response to COVID-19

In 2021, COVID-19 restrictions meant that many staff members were working from home, fewer people were able to travel on Shell business and many of our work activities, including higher-risk ones, were reduced or carried out differently. Sadly, one contractor died in 2021 after catching the virus in the course of working for Shell. In 2020, two contractors died after they caught COVID-19 at work.

We continued to support our people during COVID-19, for example by providing office equipment for home use for employees through our Home Ergonomics Programme.

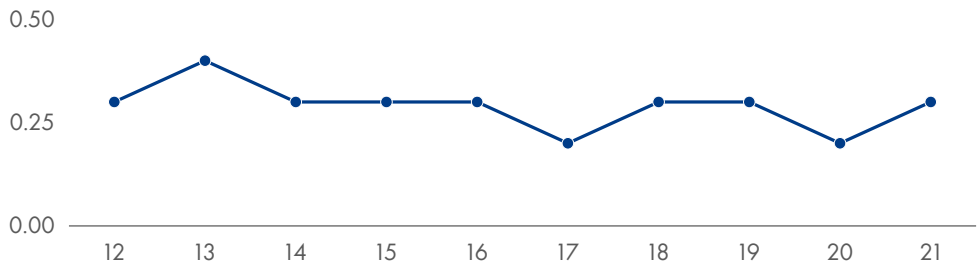
The COVID-19 pandemic continues to have a serious impact on people's health and livelihoods in most parts of the world, including communities where we work. We continued to support vulnerable groups and frontline workers through monetary donations and by providing medical supplies and other necessities.

Read more about Shell's response to COVID-19 at www.shell.com/covid19.

Lost time injury frequency (LTIF)

LOST TIME INJURY FREQUENCY (LTIF)

Number per million hours



The level of injuries that led to time off work in 2021 increased to 0.3 cases per million hours compared with 0.2 in 2020.

Read more about our approach to personal safety at www.shell.com/sustainability/safety/personal-safety.

Read more about how Shell's 2021 safety performance impacted remuneration in the Directors' Remuneration Report in our Annual Report.

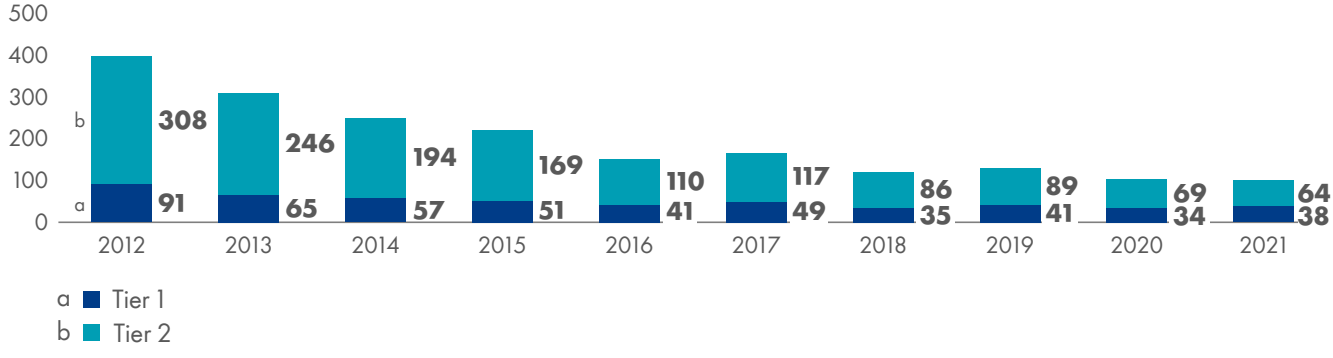
More in this report Preparing for emergencies | Letter from the CEO
More on Shell websites Powering Progress – transitioning to net-zero emissions | Safety | HSSE materials for contractors

PROCESS SAFETY

In line with industry standards, we measure and report process safety incidents according to significance, with Tier 1 as the most significant category.

TIER 1+2 OPERATIONAL PROCESS SAFETY EVENTS [A]

* excluding sabotage



[A] Process safety events are classified according to guidance from the IOGP and API. In 2021, there were seven Tier 1 sabotage-related events. The classification of sabotage-related process safety events is made on the best-endeavours basis.

The number of Tier 1 and 2 operational process safety events stagnated at 102 in 2021, compared with 103 in 2020. Of these, 38 were Tier 1 and 64 were Tier 2 events in 2021. For comparison, there were 34 Tier 1 and 69 Tier 2 operational process safety events in 2020.

Process safety events related to sabotage and theft in Nigeria are recorded separately. In Nigeria, there were seven Tier 1 events in 2021, compared with one in 2020.

Read more about process safety at www.shell.com/process-safety.

More in this report Our approach to safety | Letter from the CEO
More on Shell websites Powering Progress – transitioning to net-zero emissions | Process safety

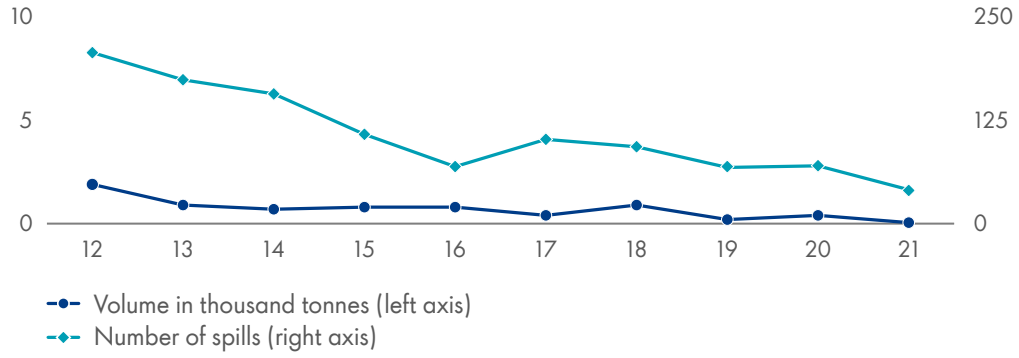
PREPARING FOR EMERGENCIES

Ensuring that we have the necessary resources to deal with spills, leaks, fires and explosions, both offshore and onshore, is essential to meet our aim to do no harm to people and to have no leaks across our operations. We must maintain the robust procedures and capability to respond rapidly to an incident in our operations, in collaboration with relevant stakeholders.

Spills

We have programmes in place across our operations to reduce the number of operational spills. The volume of operational spills of oil and oil products of more than 100 kilograms to the environment (land or water) in 2021 was 0.05 thousand tonnes, a significant decrease from 0.4 thousand tonnes reported for 2020. In 2020, the numbers included an underground leak of around 0.3 thousand tonnes (plus or minus 30%) of light gas oil in Germany, formed at some point between 2016 and 2019, with the volume established in 2020. In 2021, the largest operational spill was a spill of around 15 tonnes in Nigeria.

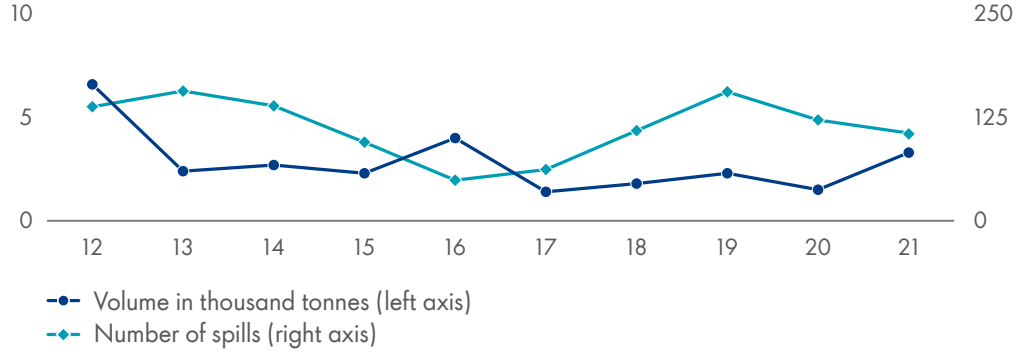
SPILLS – OPERATIONAL [A]



[A] All spill volumes and numbers are for hydrocarbon spills of more than 100 kilograms. We have updated some of our historical figures following a review of the data.

There were 41 operational spills of more than 100 kilograms in 2021, compared with 70 in 2020.

SPILLS – SABOTAGE [A] [B]



[A] Sabotage- and theft-related spills of more than 100 kilograms. We have updated some of our historical figures following a review of the data.
[B] All sabotage- and theft-related spills occurred in Nigeria except in 2016 (0.001 thousand tonnes).

In 2021, all the spills caused by sabotage and theft were in Nigeria. The number of these spills decreased to 106 in 2021 from 122 in 2020, while the volume of these spills increased to 3.3 thousand tonnes from 1.5 thousand tonnes in 2020.

Read about our emergency response procedures at www.shell.com/process-safety.

More in this report Spill response and prevention in Nigeria | Our approach to safety | Letter from the CEO
More on Shell websites Our strategy: Powering Progress | Our approach | Process safety

SPILL RESPONSE AND PREVENTION IN NIGERIA

The Shell Petroleum Development Company of Nigeria Ltd (SPDC) produces oil and gas through its SPDC joint venture (SPDC-operated, with Shell interest 30%), which operates a network of wells and pipelines across the Niger Delta.

Over the last 11 years, the total number of operational spills in the Niger Delta has fallen significantly, from more than 60 in 2011 to 9 in 2021. The SPDC JV also continues to work at preventing spills caused by third-party interference and other illegal activities. The JV has increased security and surveillance, and implemented several local initiatives to address the underlying causes and raise awareness of the damage caused by sabotage and theft.

Regardless of the cause of a spill, the SPDC JV cleans up and remediates areas affected by spills originating from its facilities. With operational spills, SPDC pays compensation to affected people and communities. When a spill is caused by illegal activities, SPDC provides relief to the communities affected on a case-by-case basis. This relief can include food, health checks and clean water supply. In 2021, the time needed to complete the recovery of free-phase oil – oil that forms a separate layer and is not mixed with water or soil – was around six days.

Spill response and prevention in Nigeria

Spills in 2021	Clean-up	Prevention
Number of operational spills: 9 [A] Volume of operational spills: 29 tonnes	Average days before joint investigations commence: 2 days in 2021, improved from six days in 2016	Illegal theft points removed: 195 in 2021, 922 in total since 2016
Number of spills caused by third-party interference and other illegal activities: 106 [B], 91% of the total number	Average days to complete the recovery of surface oil: around 6 days in 2021, improved from 13 days in 2016	Steel cages installed to protect wellheads: 283 in total
Volume of spills caused by third-party interference and other illegal activities: 3,333 tonnes, 99% of the total volume	Number of sites remediated: 187 in 2021, 651 in total since 2016	Breaches of steel cages in 2021: 29 out of 1,700 attempts

[A] We have updated the number of operational spills from 10 (as reported in the Annual Report) to 9 in 2021 following a review of data which indicates that a spill previously thought to be operational, was instead residual impact from a previous incident.
[B] We have updated the number of sabotage spills from 107 (as reported in the Annual Report) to 106 in 2021 following a review of data to exclude a spill from OML 17, as the spill occurred after the divestment.

By the end of 2021, a total of 283 cages had been installed to protect wellheads, including 62 that had been upgraded with CCTV. This compared with a total of 364 installed cages at the end of 2020. The year-on-year reduction of 81 cages was attributable to the 2021 divestment of the OML-17 licence.

SPDC continues to review its portfolio options for onshore oil in Nigeria. In the last decade, SPDC has reduced its licences in this area by half.

Read more on spill prevention and response in Nigeria at www.shell.com.ng/environment and www.shell.com.ng/oil-spills.

More in this report Contributing to Nigeria's economy | Preparing for emergencies | Our approach to safety
More on Shell websites Our strategy: Powering Progress | Oil Spill Data | Shell Nigeria | Shell Nigeria | Nigeria Briefing Notes 2021

TRANSPORT SAFETY

Safety at sea

We manage a global fleet of 26 tankers and liquefied natural gas carriers. One of our biggest challenges during the COVID-19 pandemic has been to keep our crews safe from infection. Shell is amongst the 700 original signatories of The Neptune Declaration, an international agreement aimed at supporting seafarers during the pandemic.

Air safety

In 2021, our owned and contracted aircraft flew more than 40,000 hours and safely delivered around 400,000 Shell employees and contractors. On top of rotating critical workers, such as our shipping crews, Shell's own aircraft were used to fill gaps in commercial services globally, including evacuating families from high-risk countries and transporting cargo.

Road transport safety performance

In 2021, Shell employees and contractors drove around 470 million kilometres on business in more than 50 countries. There were no fatalities related to road transport in activities under the operational control of a Shell company in 2021. By the end of December, we recorded more than 1.2 billion kilometres with no fatalities in almost two-and-a-half years. In 2021, around 11,000 Shell employees and contractors completed some form of in-vehicle or virtual defensive driving training.

Read more about transport safety at www.shell.com/sustainability/safety/transport-safety.

More in this report Process safety | Our approach to safety | Letter from the CEO

More on Shell websites Our strategy: Powering Progress | Transport safety | Community road safety

PRODUCT STEWARDSHIP

We work to ensure our products – such as fuels, lubricants and chemicals – are safe throughout their life cycle. In 2021, we carried out more than 400 risk assessments for products and additives. We also published and distributed around 150,000 safety data sheets to customers in about 180 countries.

Read more about product stewardship at www.shell.com/product-stewardship.

More in this report Circular economy and waste | Driving innovation | Letter from the CEO

More on Shell websites Our strategy: Powering Progress | Product stewardship

We are expanding our wind power activities to make more renewable electricity available to our customers.

ACHIEVING NET-ZERO EMISSIONS

Our Powering Progress strategy focuses on working with our customers and across sectors to accelerate the transition to net-zero emissions, in step with society.

21 ENERGY TRANSITION
24 MANAGING GREENHOUSE GAS EMISSIONS
32 PROVIDING LOWER-CARBON ELECTRICITY
36 FUELLING MOBILITY
39 DRIVING INNOVATION

ENERGY TRANSITION

OUR APPROACH TO CLIMATE CHANGE AND THE ENERGY TRANSITION

POWERING **PROGRESS**

Working with our customers and across sectors to accelerate the transition to net-zero emissions.

- Our climate target is to become a net-zero emissions energy business by 2050, in step with society's progress in achieving the goal of the UN Paris Agreement on climate change.
- We have set targets to reduce the carbon intensity (Net Carbon Footprint) of the energy products we sell. This includes short-term targets of 3-4% by 2022, 6-8% by 2023 and 9-12% by 2024 (compared with 2016). It also includes medium- and long-term targets of 20% by 2030, 45% by 2035, and 100% by 2050 (compared with 2016), in step with society.
- In October 2021, we announced an absolute emissions reduction target of 50% by 2030, compared with 2016 levels on a net basis. This new target covers all Scope 1 and 2 emissions under Shell's operational control and complements our existing carbon-intensity targets.

In 2021, Shell reshaped and restructured its organisation to place our energy transition strategy at the heart of everything we do. Our governance is designed to effectively manage our transition to a net-zero emissions energy business by 2050, in step with society's progress towards achieving the goals of the Paris Agreement.

Becoming a net-zero emissions energy business means that we are reducing emissions from our operations and from the fuels and other energy products, such as electricity, that we sell to our customers. It also means capturing and storing any remaining emissions using technology, protecting natural carbon sinks and providing high-quality nature-based solutions to our customers to offset unavoidable emissions.

Because emissions resulting from customer use of our energy products make up the greatest percentage of Shell's carbon emissions, this is where we can make the greatest contribution to the energy transition, by increasing sales of low-carbon energy products and services.

We have set short-, medium- and long-term targets to track our performance against our overall climate target over time. These targets are measured using the net carbon intensity metric.

We follow the GHG Protocol's Corporate Accounting and Reporting Standard, which defines three scopes of greenhouse gas emissions:

- Scope 1: direct greenhouse gas emissions from sources that are owned or controlled by Shell.
- Scope 2: indirect greenhouse gas emissions from generation of purchased energy consumed by Shell.
- Scope 3: other indirect greenhouse gas emissions, including emissions associated with the use of energy products sold by Shell.

In October 2021, in support of our 2050 net-zero emissions target, we set a target to reduce Scope 1 and 2 absolute emissions from assets and activities under our operational control (including divestments) by 50% by 2030, compared with 2016 levels on a net basis.

We have also established remuneration policies which are designed to support us in achieving our short-term climate targets.

Read more about our climate target at www.shell.com/energy-and-innovation/the-energy-future/our-climate-target and in our Annual Report.

Read more about our approach to climate change in our Energy Transition Report at www.shell.com/SET.

Assessing climate-related risks

As Shell has operations both onshore and offshore, the potential physical impacts of climate change are important for us to manage. In this respect, we consider the physical risks to our assets and facilities to ensure they can operate and be accessed safely under extreme weather conditions.

Projects under development that are expected to have a material greenhouse gas impact must meet our internal carbon performance standards or industry benchmarks. Our performance standards are used for measuring a project's average lifetime greenhouse gas intensity or energy efficiency per asset type. Applying these criteria ensures that our projects can compete and prosper in the energy transition. An exception process is in place to manage specific incidental cases.

Read more about climate risk management in our Annual Report.

More in this report Our Powering Progress targets | Managing greenhouse gas emissions | Letter from the CEO | Performance overview
More on Shell websites Powering Progress – transitioning to net-zero emissions | Our climate target | Our Climate Target: Frequently Asked Questions

DELIVERING OUR CLIMATE TARGETS

Net carbon intensity

Shell's net carbon intensity (NCI) provides an annual measure of the life-cycle emissions intensity of the portfolio of energy products sold. It is the average intensity, weighted by sales volume, of the energy products sold by Shell. It is tracked, measured and reported using the Net Carbon Footprint (NCF) methodology.

We express our net carbon intensity as the grams of CO_2 equivalent per megajoule (gCO_2e/MJ) produced for each unit of energy delivered to, and used by, a consumer.

Shell's net carbon intensity in 2021 was 77 gCO_2e/MJ. Although this is a 2.7% increase from the previous year, it represents a 2.5% reduction from the 2016 reference year, which means that we achieved our first short-term target of a 2-3% reduction in NCI by the end of 2021.

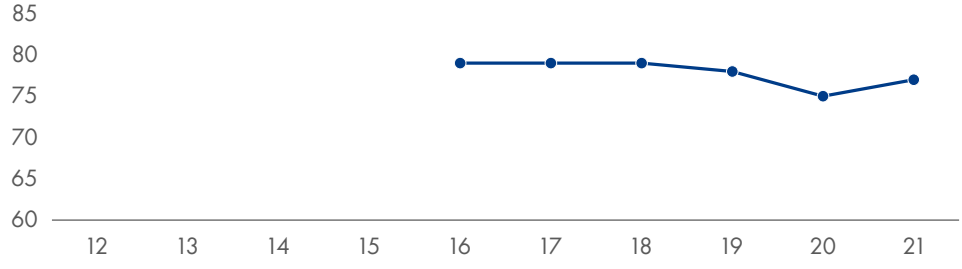
The increase in Shell's net carbon intensity in 2021 is largely due to the introduction of an improved approach for the estimation of the emissions intensity of power sold by Shell. The new approach is based on categorising power sales as certified renewable; own generation or power purchase agreement; or power purchased from the grid. Intensities are then assigned to each power sales category allowing a better estimation of the overall intensity of power sold by Shell.

We have received third-party limited assurance on our carbon intensity, measured and reported using the Net Carbon Footprint methodology, for the period 2016 to 2021. Limited assurance means nothing has come to the auditor's attention that would indicate that the greenhouse gas data and information as presented in the Greenhouse Gas Statement were not materially correct.

Read more about our Net Carbon Footprint methodology at www.shell.com/ncf.

NET CARBON INTENSITY [A] [B]

gCO_2e/MJ



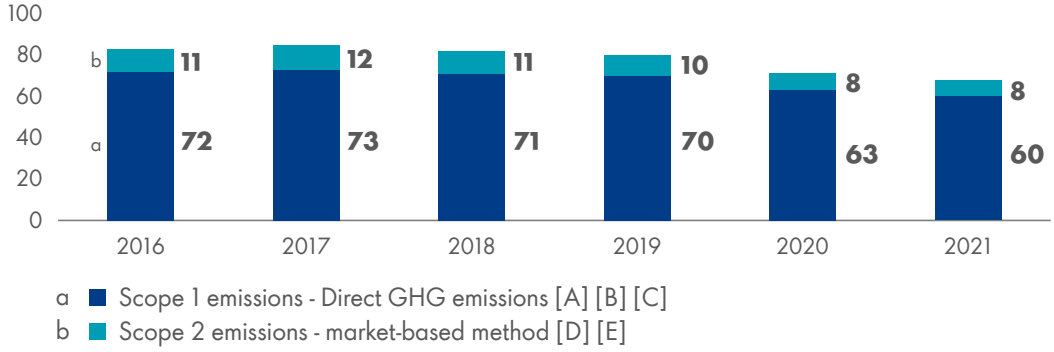
[A] The NCI calculation uses Shell's energy product sales volume data, as disclosed in the Annual Report and Sustainability Report. This excludes certain contracts held for trading purposes and reported net rather than gross. Business-specific methodologies to net volumes have been applied in oil products and pipeline gas and power. Paper trades that do not result in physical product delivery are excluded. Retail sales volumes from markets where Shell operates under trademark licensing agreements are also excluded from the scope of Shell's carbon intensity metric.
[B] Acquisitions and divestments are included in the actual performance tracking with the target and reference year unchanged. Note that acquisitions and divestments could have a material impact on meeting the targets.

Absolute emissions reduction performance

In 2021, our total combined Scope 1 and 2 absolute greenhouse gas emissions (from assets and activities under our operational control) were 68 million tonnes on a CO_2 equivalent basis, a 4% reduction compared with 2020, and an 18% reduction compared with 2016, the base year. Our Scope 3 emissions from energy products included in our net carbon intensity were 1,299 million tonnes CO_2e.

SCOPE 1 AND 2 EMISSIONS UNDER OPERATIONAL CONTROL

million tonnes CO_2e



[A] Greenhouse gas emissions (GHG) comprise carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, sulphur hexafluoride and nitrogen trifluoride. The data are calculated using locally regulated methods where they exist. Where there is no locally regulated method, the data are calculated using the 2009 API Compendium, which is the recognised industry standard under the GHG Protocol Corporate Accounting and Reporting Standard. There are inherent limitations to the accuracy of such data. Oil and gas industry guidelines (IPIECA/API/IOGP) indicate that several sources of uncertainty can contribute to the overall uncertainty of a corporate emissions inventory. We have estimated the overall uncertainty for our direct GHG emissions to be around 4% for 2021.
[B] GHG emissions are calculated using Global Warming Potential factors from the IPCC's Fourth Assessment Report.
[C] GHG emissions in this chart do not include carbon credits.
[D] We have restated our 2020 Scope 2 emissions from 9 to 8 million tonnes CO_2e following a correction of an efficiency factor for steam at one of our assets and a revision to how internal energy transfers of steam and electricity were accounted for at several of our assets to remove double-counting between Scopes 1 and 2.
[E] We have estimated the overall uncertainty for our Scope 2 emissions to be around 6% for 2021.

More in this report Managing greenhouse gas emissions | Our Powering Progress targets | Letter from the CEO | Performance overview
More on Shell websites Our strategy: Powering Progress | Our climate target | Our Climate Target: Frequently Asked Questions

MANAGING GREENHOUSE GAS EMISSIONS

GREENHOUSE GAS EMISSIONS

POWERING **PROGRESS**

We aim to be net zero on emissions generated by our operations by 2050 or sooner, in step with society, as well as on emissions associated with the energy we need to power them.

In October 2021, we announced an absolute emissions reduction target of 50% by 2030, compared with 2016 levels on a net basis. This new target covers all Scope 1 and 2 emissions under Shell's operational control and complements our existing carbon-intensity targets.

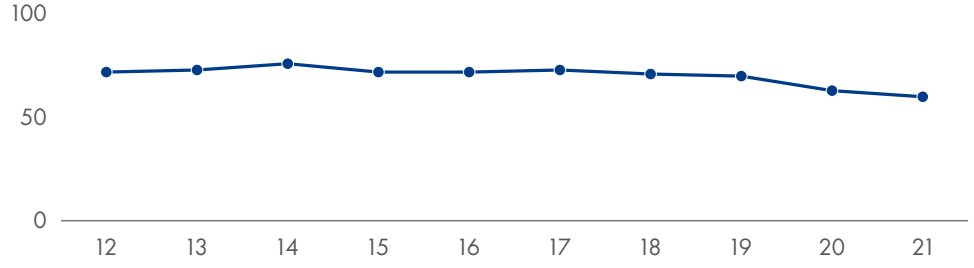
Greenhouse gas emissions performance

Shell reduced Scope 1 and 2 emissions under its operational control from 83 million tonnes in 2016 to 68 million tonnes by the end of 2021 (see Delivering our Climate targets).

Our direct (Scope 1) greenhouse gas (GHG) emissions decreased from 63 million tonnes of carbon dioxide (CO_2) equivalent in 2020 to 60 million tonnes of CO_2 equivalent in 2021.

DIRECT GREENHOUSE GAS EMISSIONS

million tonnes CO_2e

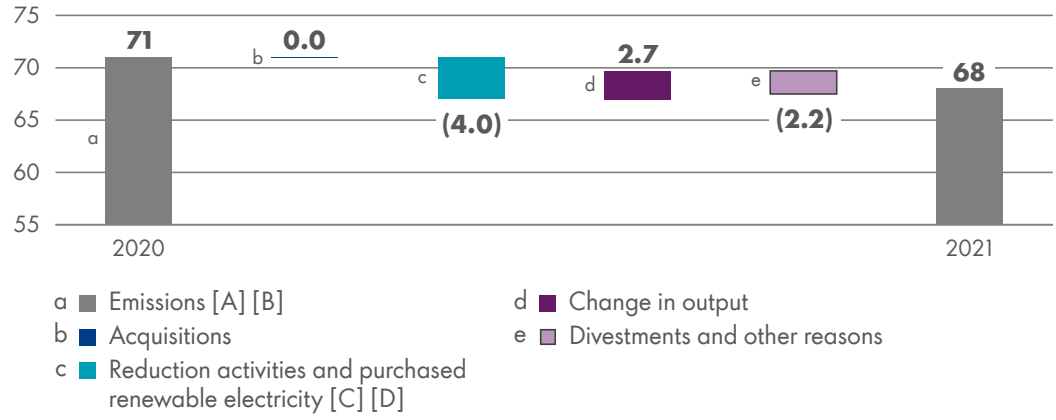


This decrease was in part driven by the shutdown of the Shell Convent Refinery (USA) in late 2020, lower production at the Shell Norco Manufacturing Complex (USA) due to Hurricane Ida, and divestments in 2020 and 2021, which included the Martinez and Puget Sound refineries in the USA and the Fredericia refinery in Denmark. These decreases were partly offset by higher emissions due to the restart of the Prelude floating liquefied natural gas (LNG) facility in Australia (which was shut down for most of 2020) and increased flaring at Shell Nigeria Exploration and Production Company Limited (SNEPCo) in Nigeria.

In 2021, we implemented a variety of measures to reduce the energy use and increase the energy efficiency of our operations. Examples of some of the principal measures taken in 2021 are listed in the 2021 Annual Report.

SCOPE 1 AND SCOPE 2 GHG EMISSIONS CHANGES FROM 2020 TO 2021

million tonnes CO_2e



[A] Total Scope 1 and Scope 2 emissions, rounded to the closest million tonnes. Scope 2 emissions were calculated using the market-based method.
[B] We have restated our 2020 Scope 2 emissions from 9 to 8 million tonnes CO_2e following a correction of an efficiency factor for steam at one of our assets and a revision to how internal energy transfers of steam and electricity were accounted for at several of our assets to remove double-counting between Scopes 1 and 2.
[C] In addition to reductions from GHG abatement and energy efficiency projects, this category also includes reductions from permanent shutdown of the Convent and Tabangao refineries and the impact of transformational activities at our Shell Energy and Chemicals Park in Singapore.
[D] Excludes 1.05 million tonnes of CO_2 captured and sequestered by our Quest CCS project in Canada in 2021.

Our indirect greenhouse gas emissions associated with imported energy (Scope 2) were 8 million tonnes in 2021 (using the market-based method), compared with 8 million tonnes in 2020.

We undertake external verification of our greenhouse gas emissions annually. Our 2021 Scope 1 and 2 greenhouse gas emissions have been verified to a level of limited assurance. Limited assurance means nothing has come to the verifier's attention that would indicate that the greenhouse gas data and information as presented in the Greenhouse Gas Statement were not materially correct.

Read our most recent assurance statements at www.shell.com/ghg.

More in this report Climate change and the energy transition | Delivering our climate targets

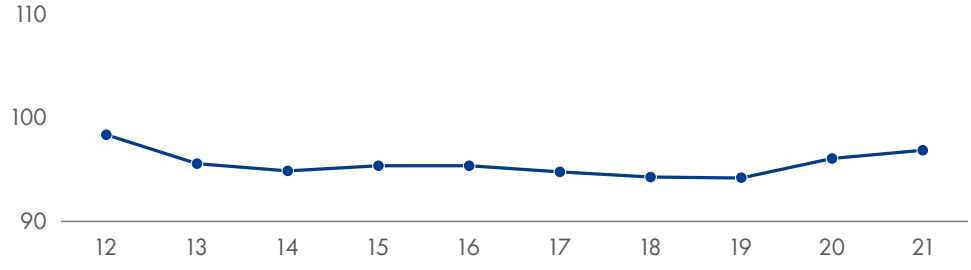
More on Shell websites Powering Progress – transitioning to net-zero emissions

ENERGY EFFICIENCY IN OUR OPERATIONS

One of the metrics we use to measure our performance is energy intensity: the amount of energy consumed for every unit of output.

ENERGY INTENSITY – REFINING

Refinery Energy Index [A]

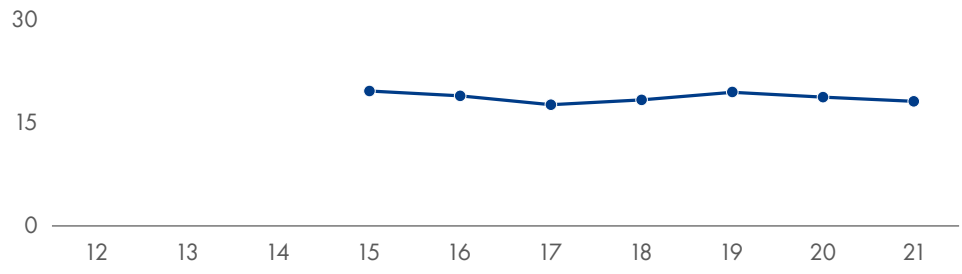


[A] Data are indexed to 2002, based on Solomon Associates Energy Intensity Index™ methodology.

The refinery energy intensity index increased from 96.1 in 2020 to 96.9 in 2021, in part due to the impact of Hurricane Ida in the USA.

ENERGY INTENSITY – CHEMICAL PLANTS

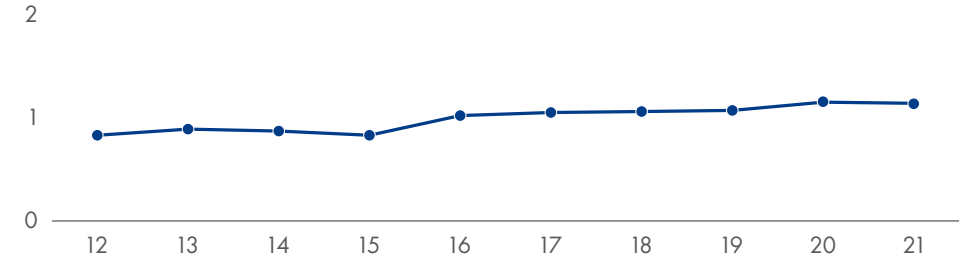
Chemicals Energy Intensity – GJ/tonne production



Chemical steam cracker energy intensity in 2021 was 18.1 gigajoules per tonne (GJ/tonne) of high-value chemical (HVC) production, down from 18.7 GJ/tonne HVC in 2020, in part due to good reliability and high utilisation at our Bukom chemical plant in Singapore and Deer Park in the USA.

ENERGY INTENSITY – UPSTREAM

(excl. LNG and GTL) GJ/tonne production



In 2021, the overall energy intensity for the production of oil and gas in our Upstream and Integrated Gas businesses (excluding liquefied natural gas and gas-to-liquids) remained relatively flat at 1.14, compared with 1.15 in 2020.

We expect it will be difficult to maintain the energy intensity levels of recent years, as existing fields age and new production comes from more energy-intensive sources. This may increase our upstream energy intensity over time.

More in this report Climate change and the energy transition | Sustainability at Shell | Our standards and policies

More on Shell websites Our strategy: Powering Progress | Reducing Methane Emissions in Shale Oil and Gas | Greenhouse gas emissions

METHANE EMISSIONS

POWERING **PROGRESS**

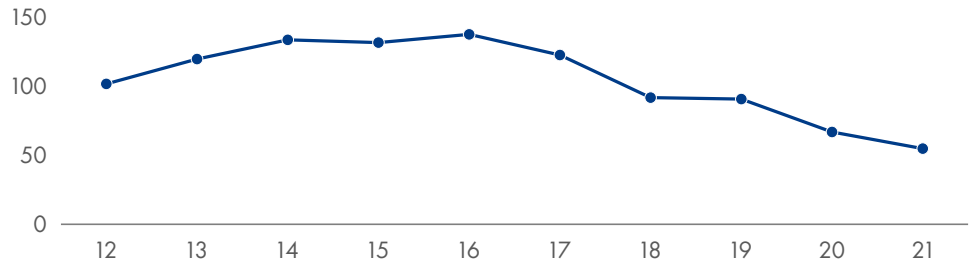
By 2025, we expect to have kept the methane emissions intensity of Shell-operated assets to below 0.2%.

Methane emissions performance

Shell's methane emissions intensity target covers all Upstream and Integrated Gas oil and gas assets for which Shell is the operator. In 2021, our methane emissions intensity averaged 0.06% for assets with marketed gas and 0.01% for assets without marketed gas. Shell's methane emissions intensity ranged from below 0.01% to 1.5% in 2021 compared with 0.01% to 0.6% in 2020.

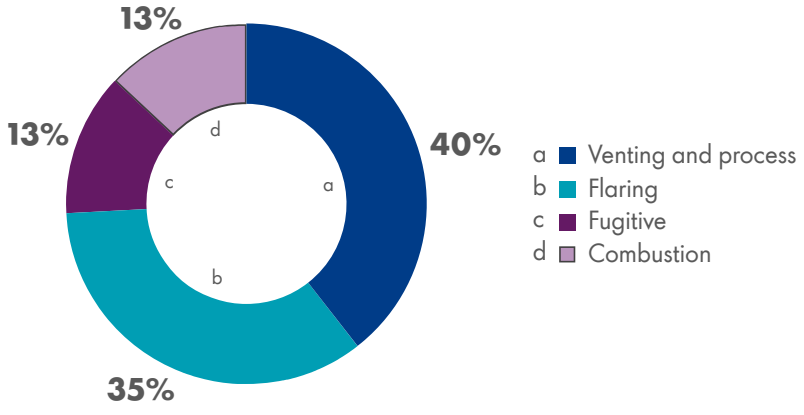
METHANE (CH_4) EMISSIONS

thousand tonnes



METHANE EMISSIONS BY SOURCE IN 2021 [A]

percentage



[A] Percentages do not add up to 100% due to rounding.

In 2021, Shell's total methane emissions were 55 thousand tonnes compared with 67 thousand tonnes in 2020, in part due to reduced methane emissions reported for Malaysia because we relinquished the operatorship of two complexes (E11PA and E11PB) on December 31, 2020. We also implemented a more accurate method for calculating fugitive emissions at the Shell-operated QGC natural gas facility in Australia. Methane emissions were less than 3% of Shell's greenhouse gas emissions on a CO_2-equivalent basis in 2021. More than 65% of our reported methane emissions in 2021 came from flaring and venting in our upstream and midstream operations.

We encourage industry-wide action on methane emissions reduction by participating in voluntary initiatives.

For example, we participate in multi-stakeholder groups, such as the Methane Guiding Principles coalition, which we initiated in 2017, and the Oil and Gas Methane Partnership (OGMP) 2.0, which seeks to improve measurement and reporting. In 2021, environmental organisations and energy companies, including Shell, developed policy recommendations to support European Union (EU) legislation for ambitious methane emissions reductions across the supply chain of natural gas consumed within the EU.

Read more about Shell and methane emissions at www.shell.com/energy-and-innovation/natural-gas/methane-emissions.

More in this report Climate change and the energy transition | Managing greenhouse gas emissions | Wind | Integrated power

More on Shell websites Our strategy: Powering Progress | Methane emissions | Reducing Methane Emissions in Shale Oil and Gas | Greenhouse gas emissions | Air Quality

FLARING

POWERING **PROGRESS**

We have committed to bringing forward the target to eliminate routine gas flaring from our Upstream operated assets from 2030 to 2025.

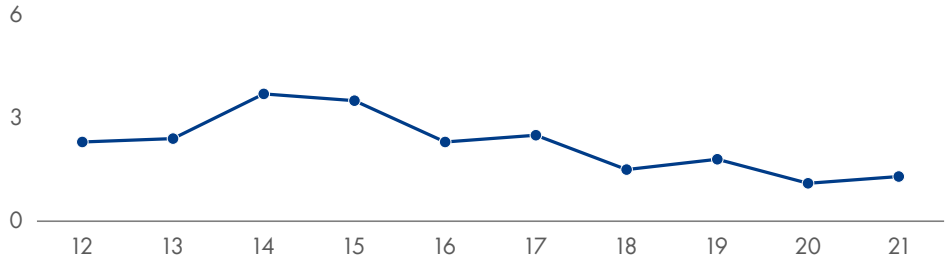
We are working to reduce flaring, which contributes to climate change and wastes valuable resources. We have committed to bringing forward our target. This accelerates our commitment in 2015 to end routine flaring as a signatory to the World Bank's Zero Routine Flaring by 2030 initiative. All of Shell's operated assets within the Integrated Gas business already comply with zero routine flaring, as they were designed to gather gas resources to sell and avoid routine flaring.

Flaring performance

Flaring of gas in our Upstream and Integrated Gas businesses contributed around 7% to our overall direct greenhouse gas (GHG) emissions in 2021.

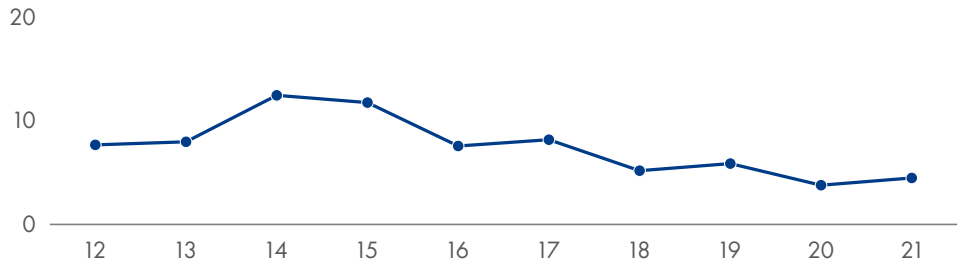
FLARING – UPSTREAM HYDROCARBONS FLARED

million tonnes



FLARING – UPSTREAM CO_2 EQUIVALENT

million tonnes CO_2e



Gas routinely produced with oil, known as associated gas, may be flared. In 2021, around 17% of greenhouse gas emissions from flaring occurred at facilities where there was no infrastructure to capture the gas (down from around 24% in 2020). Overall flaring increased to 4.5 million tonnes of carbon dioxide equivalent (CO_2e) in 2021 from 3.8 million tonnes of carbon dioxide equivalent in 2020.

Around 60% of flaring in our Upstream and Integrated Gas facilities in 2021 occurred in assets operated by the Shell Petroleum Development Company of Nigeria Limited (SPDC) and Shell Nigeria Exploration and Production Company Limited (SNEPCo). Flaring from SPDC-operated facilities increased by around 5% in 2021 compared with 2020. Flaring at SNEPCo-operated facilities increased by 160% in 2021 compared with 2020. This was because repairs to a flexible joint on the gas export riser on the Bonga deep-water floating production, storage and offloading (FPSO) facility took longer than planned. A large amount of gas was therefore flared while the FPSO continued to produce oil.

Read more about our flaring reduction commitment at www.shell.com/inside-energy/zero-routine-flaring-by-2025.

More in this report Climate change and the energy transition | Energy transition | Managing greenhouse gas emissions

More on Shell websites Our strategy: Powering Progress | Reducing Flaring in Shale Oil and Gas | External voluntary codes | Air Quality

SECTORAL DECARBONISATION

POWERING **PROGRESS**

Working with our customers and across sectors to accelerate the transition to net-zero emissions.

We are helping our customers to find ways to reduce their overall carbon footprint, including in sectors that are difficult to decarbonise such as aviation, shipping, road freight and industry. For example, we have an ambition to produce around 2 million tonnes of sustainable aviation fuel (SAF) a year by 2025 and increase its share to at least 10% of our global aviation fuel sales by 2030.

To help accelerate the transition to net-zero emissions, we will build on existing relationships with other stakeholders, such as energy suppliers, policymakers, infrastructure owners and consumers to support a sector-based approach. Transforming energy demand is the focus of our decarbonisation strategy. We are working with customers sector-by-sector across the energy system and will change the mix of energy products we sell to meet their changing energy demands.

Read more about sectoral decarbonisation at www.shell.com/energy-and-innovation/the-energy-future/cutting-carbon-together-sector-by-sector and in the Energy Transition Report at www.shell.com/SET.

More in this report Climate change and the energy transition

More on Shell websites Our strategy: Powering Progress | Reducing Methane Emissions in Shale Oil and Gas | Greenhouse gas emissions

REALISING THE ROLE OF NATURE

POWERING **PROGRESS**

Our aim is to use nature-based solutions to mitigate emissions of around 120 million tonnes of CO_2 per year by 2030.

Nature-based solutions (NBS) conserve, enhance and restore ecosystems – such as forests, grasslands and wetlands – to prevent greenhouse gases or reduce atmospheric CO_2 levels. NBS provide benefits for people and the environment by preserving biodiversity, preventing floods, improving air quality and building more resilient and healthy communities.

Carbon credits generated from NBS projects can be used by Shell to compensate for our own emissions and to allow our customers to offset their emissions in line with the mitigation hierarchy of avoid, minimise and offset. As part of our selection criteria for NBS, we look for projects that will have a net positive impact for biodiversity and communities.

Carbon credits can also be generated by other types of projects, for example cookstoves. Better cooking facilities that displace open fires reduce carbon emissions, prevent local deforestation and improve air quality and therefore health.

In 2021, we aimed to invest around $100 million in nature-based solutions such as forests and wetlands that store carbon.

Projects may need different levels of funding at different stages of development. In 2021, investments were also affected by COVID-19, as site visits to potential projects were not possible. Establishing our new NBS team following a reorganisation also took some time. Nevertheless, in 2021, we allocated more than $480 million to various projects, to be deployed across the length of the contracts. More than 95% of this funding is for NBS projects. We deployed $37 million in 2021: $26 million for NBS and $11 million for cookstove projects and we retired around 6 million credits on behalf of our customers. These numbers exclude direct carbon trading activities.

In November 2021, Shell published its "Ensuring high-quality nature-based carbon credits" report that sets out our expectations and approach to quality across our NBS portfolio.

In 2021, we expanded our offer of carbon credits to drivers and business customers who wish to compensate for the life-cycle CO_2-equivalent emissions generated by their use of the Shell fuel they buy. We have made this offer available to our fleet customers in 17 countries and to retail customers at more than 3,100 service stations in Austria, Canada, Germany, Hungary, the Netherlands, Switzerland and the UK.

Read more about nature-based solutions at www.shell.com/energy-and-innovation/new-energies/nature-based-solutions.

More in this report Climate change and the energy transition | Carbon capture and storage | Managing greenhouse gas emissions | Energy transition

More on Shell websites Our strategy: Powering Progress | Nature-based solutions

CARBON CAPTURE AND STORAGE

POWERING **PROGRESS**

We seek to have access to an additional 25 million tonnes a year of carbon capture and storage (CCS) capacity by 2035 – equal to 25 CCS facilities the size of our Quest site in Canada.

Shell's ambition is to work with governments, customers and partners to unlock the potential for CCS to reduce emissions where there are no currently scalable low-carbon alternatives. In 2021, Shell's operating costs for and investment in CCS opportunities amounted to around $146 million.

By the end of 2021, our Quest CCS project in Canada (Shell interest 10%) had captured and safely stored more than 6.5 million tonnes of CO_2 since it began operating in 2015. In Australia, the Gorgon CCS project (Shell interest 25%, operated by Chevron), which started operating in August 2019, had stored more than 5 million tonnes of CO_2 by the end of 2021. Gorgon is the largest CCS operation in the world.

The Gorgon CCS system has presented some challenges, which resulted in a carbon injection shortfall. The operator continues to work with the regulator and the venture partners, including Shell, to make adjustments where needed. The JV announced the

implementation of a package that includes greenhouse gas offset credits and investment in lower-carbon projects to compensate for the shortfall.

Read more about our CCS projects at www.shell.com/ccs.

CCS projects

Project	CO_2 source	Country	Shell involvement	Shell interest	Total capacity (100%), million tonnes per annum	Shell-operated
CCS projects in operation						
Quest	Bitumen upgrading	Alberta, Canada	Technical developer, Operator, JV partner	10%	1 mtpa	Yes
Gorgon	CO_2 in gas	Australia	JV partner	25%	Up to 4 mtpa	No
Technology Centre Mongstad (TCM) test and research facility	Gas-fired power, refining and chemical production	Norway	JV partner	8.7%	Test site	No
CCS projects under construction						
Northern Lights (Phase 1)	Industrial sources	Norway	JV partner	33.3%	1.5 mtpa	No
CCS projects pre-FID options						
Acorn	Industrial sources	Scotland, UK	Technical developer, JV partner	30%	Around 6 mtpa	No
Aramis	Industrial sources	Netherlands	JV partner	25%	5 mtpa	No – transport Yes – storage
Northern Endurance Partnership	Industrial sources	Teesside and Humberside, UK	JV partner	TBC	4 mtpa	No
Polaris	Refining and chemical production	Alberta, Canada	Operator	TBC	0.75 mtpa	Yes
South Wales Industrial Cluster	Industrial sources	Wales, UK	Operator JV partner	TBC	1.5 mtpa	Yes
Pernis CO_2 capture (for transport and storage by the third-party Porthos project)	Refining and chemical production	Netherlands	CO_2 capture	100%	1.15 mtpa (Shell capacity)	Yes – capture No – transport and storage
Pernis SPeCCS CO_2 capture expansion	Refining and chemical production	Netherlands	CO_2 capture	100%	0.5 mtpa (Shell capacity)	TBC

More in this report Climate change and the energy transition | Realising the role of nature | Energy transition

More on Shell websites Our strategy: Powering Progress | Carbon Capture: The technology we cannot afford to ignore

PROVIDING LOWER-CARBON ELECTRICITY

INTEGRATED POWER

POWERING **PROGRESS**

We aim to increase our power sales to 560 terawatts a year by 2030.

For consumers and business customers to decarbonise their activities, lower-carbon electricity will be part of their energy mix. We believe Shell can become a leading provider of clean power.

In 2021, we sold 251 TWh of power and cash capital expenditure in Renewables and Energy Solutions amounted to $2.4 billion. In 2022, we aim to invest $3 billion in our Renewables and Energy Solutions business.

By 2030, we aim to supply electricity to more than 15 million retail and business customers worldwide and increase our power sales to 560 terawatt hours a year.

We are providing more renewable and low-carbon energy options for customers through investments in wind, solar, electric vehicle charging, hydrogen, and more.

In 2021, we signed a number of deals to supply businesses with renewable electricity, including with Amazon and T-Mobile US. Shell is also supplying Microsoft with renewable energy as part of our strategic alliance launched in 2020 to accelerate innovation in support of decarbonisation.

Find out more about our power business in the Annual Report.

Read more about lower-carbon and renewable power at www.shell.com/res.

OFFERING CUSTOMERS LOWER-CARBON AND RENEWABLE ENERGY SOLUTIONS

a selection of investments, acquisitions and ventures

2021

SOLAR
- Unveiled Qabas solar plant, Oman
- Signed deals to build two solar photovoltaic projects (pre-FID), UK
- Acquired Savion, USA
- Acquired solar-konzept Italia, Italy

Hydrogen
- Signed Letter of intent to build a 100 MW hydrogen electrolyser, Germany
- Signed MoU with BlueScope to build a 10 MW electrolyser, Australia
- Opened heavy-duty hydrogen stations, USA

Mobility
- Acquired ubitricity, UK
- Launched EV mobility hub in Paris, France

Wind
- Partnered with Simply Blue Group to develop Emerald and Western Star floating wind projects, Ireland
- Shell and CoensHexicon formed the MunmuBaram JV for a 1.3 GW floating wind project, South Korea

Trading
- Acquired Next Kraftwerke, Germany
- Acquired Inspire Energy Capital, USA
- Announced Powershop acquisition, Australia (completed 2022)

2020

SOLAR
- Final investment decision to build Gangarri solar farm, Australia

Mobility
- Masabi*, UK
- InstaFreight*, Germany
- Spiffy*, USA

Wind
- Shell and Eneco awarded tender to build 759 MW Hollandse Kust (noord) offshore wind farm, NL

NBS [A]
- Select Carbon, Australia
- Climate Bridge*, China

Hydrogen
- Announced plans to build 20 MW hydrogen electrolyser and refuelling stations, China
- ZeroAvia*, USA
- Opened hydrogen bus station, NL

ENERGY SOLUTIONS
- Palmetto*, USA
- GreenCom*, Germany

2019

Mobility
- Acquired Greenlots, USA (now Shell Recharge Solutions)
- Ravin.ai*, UK
- Revel*, USA
- Aurora*, USA
- Nordsol*, NL

Wind
- Acquired EOLFI, France
- Joint Development Agreement with CoensHexicon, South Korea

ENERGY SOLUTIONS
- Acquired sonnen, Germany
- Acquired Hudson Energy, UK (rebranded to Shell Energy Retail in 2020)
- LO3 Energy*, USA
- Corvus Energy*, Norway

NBS [A]
- Nature-based solutions projects under way in Australia, Malaysia, Netherlands, Spain and UK

ENERGY ACCESS
- Orb Energy*, India
- PowerGen*, Kenya
- d.light*, Kenya

Trading
- Acquired ERM Power, Australia (rebranded to Shell Energy in 2020)
- Acquired Limejump, UK

SOLAR
- ESCO Pacific*, Australia
- Cleantech Solar*, Asia
- Opened Moerdijk solar farm, NL

Hydrogen
- Announced plans to build Rheinland hydrogen electrolyser, Germany
- Opened hydrogen stations, Germany and Luxembourg

2018

SOLAR
- Silicon Ranch*, USA

Wind
- Atlantic Shores Offshore Wind*, USA
- Mayflower Wind Energy*, USA
- TetraSpar*, Norway

ENERGY SOLUTIONS
- Shell Energy Inside, USA
- Shell Energy Retail, UK (acquired as First Utility)

Hydrogen
- Opened light-duty hydrogen stations in California, USA, and Canada
- HyET Hydrogen*, NL

ENERGY ACCESS
- Husk Power*, India
- SunFunder*, Kenya

Mobility
- Ample*, USA

2017

Mobility
- Acquired NewMotion, NL (now Shell Recharge Solutions)
- Connected Freight*, Philippines

ENERGY SOLUTIONS
- Innowatts*, USA

ENERGY ACCESS
- SolarNow*, Uganda
- SteamaCo*, Kenya
- Sunseap*, Singapore

Trading
- Acquired MP2 Energy, USA

Hydrogen
- Opened light-duty hydrogen station, UK

[A] Nature-based Solutions
* Minority investments

WIND

We have wind power interests in several countries, including onshore in the USA and off the coasts of the USA and the Netherlands. We are expanding our wind power activities to make more renewable electricity available to our customers. This includes developing wind projects on floating platforms in deeper waters off the coasts of Ireland, Scotland, France, Norway and South Korea.

At the end of 2021, the Shell share of total installed capacity combined from onshore and offshore wind was 466 megawatts alternating current (MWac), with a further Shell share of 838 MWac under construction.

Read more about wind power at www.shell.com/wind.

Wind projects at the end of 2021

Project	Theme	Country	Shell interest	Total capacity (100%), MWac	Shell-operated
Wind projects in operation [A]					
Brazos, TX	Onshore	USA	100%	160	Yes
Whitewater Hill, CA	Onshore	USA	50%	61.5	No
Cabazon Pass, CA	Onshore	USA	50%	41	No
Blauwwind [B]	Offshore	Netherlands	20%	731.5	JV-operated
NoordzeeWind [C]	Offshore	Netherlands	100%	108	JV-operated
Wind projects under construction					
Brazos Repower [D]	Onshore	USA	100%	182	Yes
CrossWind [E]	Offshore	Netherlands	80%	759	JV-operated
Pottendijk (wind)	Onshore	Netherlands	100%	50	Yes
Wind projects pre-FID options (including seabed licences)					
25+ projects [F]	Onshore and offshore	4+ countries [G]	Varies	More than 8 GWac [E] [F]	Shell- and JV-operated options

[A] Rock River wind farm in the USA (50 MW, Shell interest 50%) closed down at the end of 2021 and is not included.
[B] Brazos Repower represents the complete replacement of the Brazos turbines, increasing capacity from 160 MW to 182 MW.
[C] Offshore options include GBI, Mayflower, Atlantic Shores and MunmuBaram pre-FID seabed licenses.
[D] Including France, South Korea, the USA and now the UK.
[E] In addition, in January 2022, Shell and ScottishPower secured joint offers for seabed rights to develop MarramWind and CampionWind, large-scale floating wind farms representing a total of 5 gigawatts (GW) off the east and north-east coast of Scotland.
[F] Also, in February 2022, the proposed total capacity for the Atlantic Shores project was increased from 3,000 MW to 4,500 MW."

More in this report Providing access to energy | Energy transition
More on Shell websites Powering Progress – transitioning to net-zero emissions | Electricity | Wind power | Solar

SOLAR

We are expanding our solar power generation capability by investing in the development and operation of long-term commercial and industrial solar projects, including at our own sites. At the end of 2021, our share of installed solar power capacity was 734 megawatts direct current (MWdc), with 1,484 MWdc under construction.

Read more about solar power at www.shell.com/solar.

Solar projects at the end of 2021

Project	Country	Shell interest	Total capacity (100%), MWdc	Shell-operated
Solar projects in operation				
Silicon Ranch [A]	USA	46.72%	1,130	No
Cleantech Solar	Asia-Pacific	24.50%	364	No
Moerdijk	Netherlands	100%	27	Yes
Sohar Solar Quabas	Oman	100%	34	Yes
Emmen	Netherlands	100%	12	Yes
Heerenveen	Netherlands	100%	14.5	Yes
Sas van Gent	Netherlands	100%	30	Yes
Solar projects under construction				
Gangarri	Australia	100%	144	Yes
Silicon Ranch [A]	USA	46.72%	2,487.90	No
Cleantech Solar	Asia-Pacific	24.50%	228.4	No
Pottendijk (solar)	Netherlands	100%	50	Yes
Koegorspolder Tractaatweg	Netherlands	100%	41	Yes
Koegorspolder Sluiskil [B]	Netherlands	100%	31	Yes
Solar projects pre-FID options				
200+ projects	14 countries [C]	Varies	Around 30 GWac	Varies

[A] The Silicon Ranch diluted equity share is now 44.33% following an equity raise that completed in February 2022.
[B] Koegorspolder Sluiskil moved into construction in February 2022.
[C] Including Brazil, China, France, Germany, India, Italy, Japan, Netherlands, Oman, Philippines, Singapore, Spain, UK, USA.

More in this report Providing access to energy | Energy transition
More on Shell websites Powering Progress – transitioning to net-zero emissions | Electricity | Wind power | Solar

FUELLING MOBILITY

BIOFUELS

POWERING **PROGRESS**

Our aims include producing:

- Eight times more low-carbon fuels than in 2021 by 2030 (including Raízen production)
- Around two million tonnes of sustainable aviation fuel a year by 2025

We are producing and supplying low-carbon fuels such as biodiesel, bioethanol, renewable natural gas (also known as RNG, biogas or biomethane), renewable diesel (also known as hydrotreated vegetable oil or HVO) and sustainable aviation fuel to help lower the carbon emissions from transportation. These fuels can be blended with existing fuels, such as gasoline and aviation fuel, and do not require costly investment in new infrastructure, which means they are a practical option for reducing transport emissions.

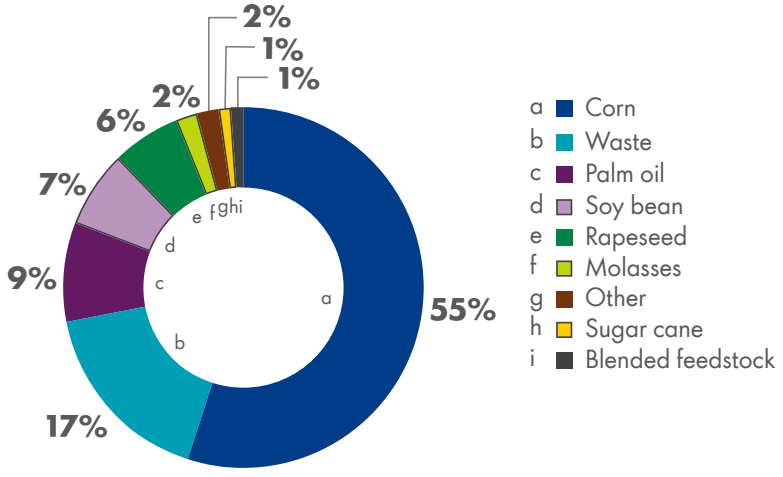
The Raízen joint venture (Shell interest 44%, not Shell-operated) in Brazil is one of the world's largest biofuel producers, with one of the lowest-CO_2 biofuels available today. In 2021, Raízen produced around 2.5 billion litres of ethanol from sugar cane. In 2021, Raízen's Costa Pinto mill in Brazil also produced 19 million litres of second-generation cellulosic ethanol made from inedible agricultural waste or forestry products.

In September 2021, we announced a final investment decision to build an 820,000-tonnes-a-year biofuels facility at the Energy and Chemicals Park Rotterdam, the Netherlands, which was formerly known as the Pernis refinery.

In 2021, around 9.1 billion litres of biofuels went into Shell's petrol and diesel worldwide, which included 3.2 billion litres through our joint venture Raízen on an equity basis. In 2020, around 9.5 billion litres of biofuels went into Shell's petrol and diesel worldwide.

GLOBAL BIOCOMPONENT PURCHASE BY FEEDSTOCK [A]

percentage



[A] Does not include purchases by Raízen.

Sustainability of biofuels

We purchase biocomponents to blend into fuels and/or to trade. Some biofuel feedstocks are considered higher risk with regard to human rights, biodiversity or the release of carbon into the atmosphere. To help mitigate these risks, all the palm oil, sugar cane and South American soy feedstock we purchase is certified as sustainable under credible sustainability standards like the Round Table on Responsible Soy, the Roundtable for Sustainable Palm Oil and Bonsucro.

Read more about our approach to the sustainable sourcing of biocomponents.

Read more about biofuels at www.shell.com/biofuels.

Sustainable aviation fuel

We have the ambition to produce around 2 million tonnes of sustainable aviation fuel (SAF) a year by 2025 and aim to have at least 10% of our global aviation fuel sales as SAF by 2030.

Read more about SAF at www.shell.com/business-customers/aviation/the-future-of-energy/sustainable-aviation-fuel.

Renewable natural gas

As cleaner-burning fuels than diesel, liquefied natural gas (LNG) and bioLNG can help the road transport industry lower emissions and costs. In 2021, we planned to grow our European LNG refuelling stations to 50 sites by the end of 2021 for bioLNG distribution. By the end of the year, we had 44 Shell-branded LNG refuelling stations across seven countries. This is an increase on the 26 stations we had in 2020. As we grow our LNG refuelling network, we aim to offer bioLNG as a blend for further emissions reductions for our customers.

Read about LNG at www.shell.com/energy-and-innovation/natural-gas/lng-for-transport/lng-for-road.

Read about renewable natural gas at www.shell.com/energy-and-innovation/new-energies/low-carbon-fuels.

More in this report Climate change and the energy transition | Driving innovation

More on Shell websites Powering Progress – transitioning to net-zero emissions | Low carbon fuels | Hydrogen

ELECTRIC VEHICLE CHARGING

POWERING **PROGRESS**

Our targets include operating:

- more than 500,000 EV charge points by 2025, of which more than 30,000 charge points are owned directly by Shell
- around 2.5 million EV charge points by 2030

Today we operate around 87,000 public and private electric vehicle (EV) charge points, including almost 8,000 public charge points at Shell service stations, on-street and at destinations like supermarkets. In 2020, we operated around 60,000 electric vehicle charge points.

In China, for example, Shell already operates more than 850 public charge points at Shell service stations as well as dedicated EV Mobility Hubs. In 2021, we announced an ambition to install 50,000 on-street EV charge posts in the UK by the end of 2025, through ubitricity, part of the Group.

Read about electric vehicle charging at www.shell.com/electric-vehicle-charging.

More in this report Climate change and the energy transition | Driving innovation
More on Shell websites Powering Progress – transitioning to net-zero emissions | Low carbon fuels | Hydrogen

HYDROGEN

POWERING **PROGRESS**

Our ambition is to capture a double-digit share of global clean hydrogen sales by 2035.

Hydrogen is a versatile energy carrier that can play a significant role in the transition to a lower-carbon world. We are investing in producing decarbonised hydrogen for our own facilities and, in the future, for customers in industry and mobility where direct electrification is challenging.

In 2021, we started production at the electrolyser at our Shell Energy and Chemicals Park Rheinland in Germany. The 10 megawatts (MW) proton exchange membrane (PEM) electrolyser uses renewable energy to produce up to 1,300 tonnes of decarbonised hydrogen a year, which we are using to make lower-carbon fuels at the park. Our joint venture Zhangjiakou City Transport and Shell New Energy Co., Limited (Shell interest 47.5%) started up a hydrogen electrolyser in China with 20 MW production capacity in January 2022.

We are also expanding the network of hydrogen refuelling stations. By the end of 2021, there were around 50 hydrogen refuelling stations at Shell-branded outlets in the USA (California), Canada, Germany, the Netherlands and the UK.

Read about hydrogen at www.shell.com/hydrogen.

More in this report Climate change and the energy transition | Driving innovation
More on Shell websites Powering Progress – transitioning to net-zero emissions | Low carbon fuels | Hydrogen

DRIVING INNOVATION

In 2021, we spent $815 million on research and development (R&D), compared with $907 million in 2020. In 2021, we started work on 182 R&D projects with universities, compared with 124 in 2020.

Our R&D activities are key to achieving our net-zero emissions target, in step with society. In 2021, our R&D expenditure on projects that contributed to decarbonisation was around $328 million, representing around 40% of our total R&D spend. This includes expenditure on reducing greenhouse gas emissions:

- from our own operations, for example by improving energy efficiency and electrification;
- from the fuels and other products we sell to our customers, for example biofuels, and synthetic fuels and products made from low-carbon electricity, hydrogen produced using renewable sources or using natural gas combined with carbon capture utilisation and storage (CCUS);
- by CCUS; and
- by creating nature-based solutions (NBS) to offset emissions.

Read more about technology and innovation at www.shell.com/energy-and-innovation/the-role-technology-plays/technology-for-a-sustainable-energy-industry.

More in this report Sectoral decarbonisation | Fuelling mobility

More on Shell websites Powering Progress – transitioning to net-zero emissions

Forests and ecosystems can play a vital role in helping tackle climate change.

RESPECTING NATURE

Our Powering Progress strategy means respecting nature by protecting the environment, reducing waste and making a positive contribution to biodiversity.

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OUR APPROACH TO RESPECTING NATURE

Protecting the environment has been an integral part of the way we do business for many years as set out in the Shell General Business Principles and Shell Commitment and Policy on Health, Security, Safety, Environment and Social Performance.

In 2021, as part of our Powering Progress strategy, we launched Respecting Nature, which sets out our environmental ambitions around biodiversity, water, circular economy and waste, and air quality. Our Respecting Nature commitments step up our approach to managing the impacts of our operations on the environment. They also aim to extend our approach with our supply chain, for example, with commitments around plastics and circular economy.

We adopted short-term goals and also set environmental ambitions for 2030 and later. Our new requirements are being embedded into our systems and processes. Accountability for delivery of this goal lies with our Executive Committee. We have restructured and resourced to add specialists on biodiversity and circularity into our organisation and are building capability with the help of external partners.

We have included our new commitments in our performance management and reporting systems and are defining the baselines for each of the commitments and setting 2022 targets across our businesses. We are working with external environmental partners to develop new approaches that will show the extent of the progress we are making towards our environmental goals.

Our purchasing policies will include requirements that reflect our environmental framework and take the energy efficiency, material efficiency and sustainability of products into consideration in our purchases. See Supply chain.

We will continue to seek opportunities to go further. Our environmental ambitions will be underpinned by collaboration and transparent reporting.

ENVIRONMENTAL COLLABORATIONS

POWERING **PROGRESS**

- Our ambition is to strengthen external partnerships and improve transparency on performance.
- We will ensure that external partnerships inform key areas of development and delivery of our ambitions.

We work with external parties to enable a positive impact on the environment. Collaboration can help us to reduce waste, improve circularity of materials and help ensure local communities benefit from our presence.

Existing collaborations and new partnerships are key to implementing our Respecting Nature ambitions. Earthwatch and the International Union for Conservation of Nature (IUCN) provided input to the development of our Respecting Nature commitments and continue to support their implementation.

We are also working with the World Business Council for Sustainable Development (WBCSD) to develop our approach to circularity.

Transparency and standards

We have joined the Taskforce for Nature-related Financial Disclosures (TNFD) Forum which is looking to develop a risk management and disclosure framework for organisations to report and act on evolving nature-related risks.

Our major installations are certified to independent environmental management system standards, such as ISO 14001 or equivalent systems required by local regulations. Major installations include crude oil and natural gas terminals, gas plants, manned offshore production platforms, refineries and chemicals manufacturing facilities. Of these, 97% were certified at end 2021. Read more about the certification of our major installations in the 2021 Annual Report.

Read more about our approach at www.shell.com/sustainability/environment.

Read more about our environmental partners at www.shell.com/sustainability/our-approach/environmental-and-community-partners.

More in this report Sustainability at Shell | Protecting biodiversity | Social investment

More on Shell websites Our strategy: Powering Progress | Respecting nature

PROTECTING BIODIVERSITY

POWERING **PROGRESS**

- Our ambition is to have a positive impact on biodiversity.
- Our new projects in areas rich in biodiversity – critical habitats – will have a net positive impact on biodiversity, starting implementation in 2021.
- Our nature-based solutions projects, which protect, transform or restore land, will have a net positive impact on biodiversity, starting implementation in 2021.
- We will replant forests, achieving net-zero deforestation from new activities, while maintaining biodiversity and conservation value, starting implementation in 2022.

In 2021, we announced a new ambition to have a positive impact on biodiversity. This builds on our earlier commitment not to explore for or develop oil and gas resources in natural and mixed World Heritage Sites.

We are developing new ways to measure how we are improving biodiversity. These are being incorporated into our processes and systems, including those for nature-based solutions and reforestation. We are working with external experts to help develop and define our approach and the way we measure our progress.

We aim to minimise the impact of our onshore and offshore projects on biodiversity and ecosystems, whether life on land or life below water. We apply the mitigation hierarchy, a decision-making framework that involves a sequence of four key actions: avoid, minimise, restore and offset. We assess the potential impact of projects on biodiversity as part of our Impact Assessment process. See Embedding Sustainability in Projects.

Potential new projects are screened to determine if they are located in a critical habitat. If we decide to progress a project that is in a critical habitat, we develop a biodiversity action plan. This sets out actions needed to follow the mitigation hierarchy and, where there is impact, the actions needed to achieve net positive impact.

In 2021, we collaborated with the International Union for Conservation of Nature (IUCN), non-governmental organisations (NGOs) and other energy companies to develop guidelines for mitigating the impact of solar and wind projects on biodiversity.

Read more about biodiversity at www.shell.com/sustainability/environment/biodiversity.

More in this report Sustainability at Shell

More on Shell websites Our strategy: Powering Progress | Biodiversity

CIRCULAR ECONOMY AND WASTE

MANAGING WASTE

POWERING **PROGRESS**

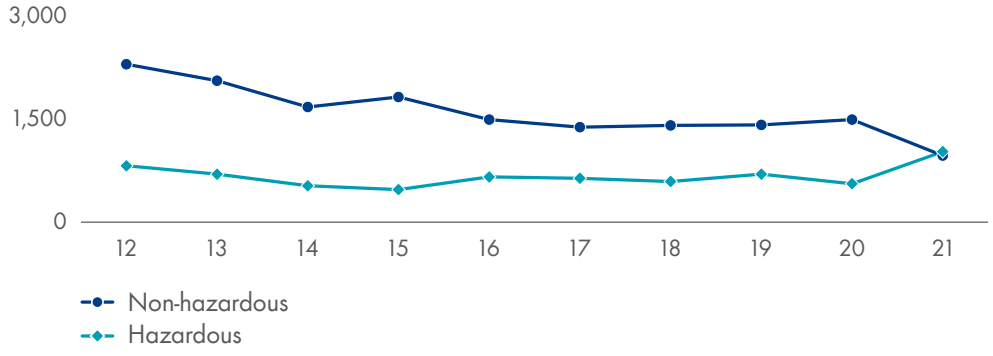
Our ambition is to use resources and materials efficiently and to increase reuse and recycling.

- We are aiming for zero waste by reducing waste generated and increasing reuse and recycling in our businesses and supply chains. We will set goals for waste reduction, reuse and recycling by the end of 2022.

In 2021, we conducted pilot projects to help develop and test a new circularity assessment methodology, which we will apply in a number of our businesses in 2022. This will help us better understand how our operations reduce, reuse and recycle waste and help us set further goals which we will develop in 2022.

WASTE DISPOSAL

thousand tonnes



In 2021, we disposed of 1,993 thousand tonnes of hazardous and non-hazardous waste, which is relatively flat compared with 2,049 thousand tonnes in 2020. We also sent 399 thousand tonnes of residual materials for reuse, recycling or beneficial use as a raw material in another process. For example, waste that might otherwise go to landfill can be incinerated to generate energy.

In 2021, our Shell Energy and Chemicals Park Rotterdam (previously Pernis refinery) in the Netherlands sent more than 80% of its waste generated (58 thousand tonnes) for recycling, reuse or use in another process.

Find out more about waste and our circular economy approach at www.shell.com/sustainability/environment/circular-economy-and-waste.

More in this report Sustainability at Shell | Our approach to respecting nature

More on Shell websites Our strategy: Powering Progress | Circular Economy and Waste

PLASTICS

POWERING **PROGRESS**

We will work with our suppliers and contractors to help end plastic waste in the environment:

- By 2030, we will increase the amount of recycled plastic in our packaging to 30% and ensure that the packaging we use for our products is reusable or recyclable.
- We will increase the amount of recycled materials used to make our products, starting with plastics. Our ambition is to use 1 million tonnes of plastic waste a year in our global chemicals plants by 2025.

Shell supports the need for improved circularity of global plastics markets and encourages reduction, reuse and recycling of plastics. We are a founding member of the Alliance to End Plastic Waste and in 2021 we set a new ambition to work with our suppliers and contractors to help end plastic waste in the environment.

We continue to explore ways to reduce, reuse and recycle packaging across our supply chains and introduce sustainable packaging. In 2021, we relaunched our range of biodegradable and carbon-neutral lubricants, which are made at solar-powered facilities using sustainable bio-based raw materials and packaged using 40% recycled plastic.

Recycling plastic waste as chemicals feedstock

We are focusing on chemical recycling where we break down hard-to-recycle plastics into raw materials through a technique called pyrolysis. The pyrolysis oil can then be used as feedstock in our chemical plants, replacing traditional hydrocarbon feedstock. This contributes to our circular economy ambition and prevents waste that would otherwise have gone to landfill or incineration.

In November 2021, we announced plans to build a new pyrolysis oil upgrader unit that improves the quality of pyrolysis oil at our Shell Energy and Chemicals Park Singapore. The facility will have a capacity of 50,000 tonnes per year, which is equivalent to the weight of about 7.8 billion waste plastic bags. Shell Ventures BV also announced a strategic partnership with BlueAlp which includes building two new units in the Netherlands to convert more than 30,000 tonnes a year of plastic waste into pyrolysis oil and exploring two more in Asia. Shell companies also have pyrolysis oil agreements with Nexus Fuels in the USA, Environmental Solutions Asia, in Singapore and Pryme in Europe.

Find out more about plastic waste at www.shell.com/plastics.

Find out more about waste and our circular economy approach at www.shell.com/sustainability/environment/circular-economy-and-waste.

More in this report Sustainability at Shell | Product stewardship | Driving innovation
More on Shell websites Our strategy: Powering Progress | Plastic waste

CONSERVING WATER RESOURCES

POWERING PROGRESS

Our ambition is to conserve fresh water by reducing consumption and increasing reuse and recycling.

- We will reduce the amount of fresh water consumed in our facilities, starting by reducing fresh-water consumption by 15% by 2025, compared with 2018 levels in areas where there is high pressure on fresh-water resources.
- We will also assess options for further reduction goals by the end of 2022.

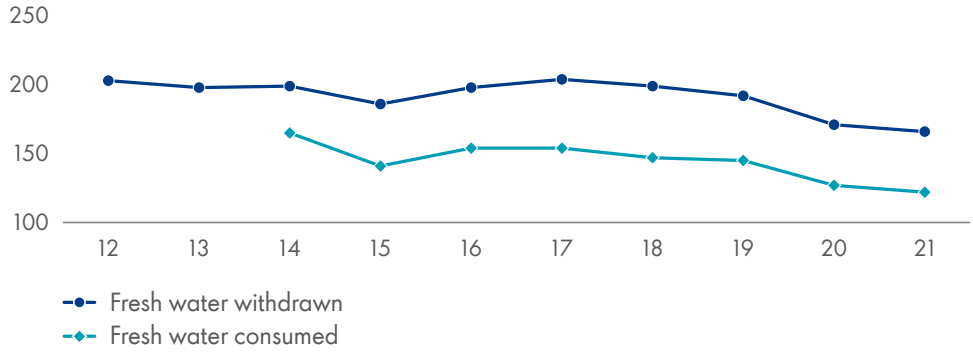
We are making steady progress in reducing our fresh-water consumption in water-stressed areas.

At the end of 2021, four of our major facilities were located in areas where there is a high level of water stress based on analysis using water stress tools, including the World Resources Institute's Aqueduct Water Risk Atlas and local assessments. The facilities are: the Pearl GTL (gas-to-liquids) plant in Qatar, Shell Energy and Chemicals Park Singapore, the Shell Jurong Island chemical plant in Singapore and Tabangao Import Terminal in the Philippines.

In 2021, our consumption of fresh water by these facilities was 22 million cubic metres compared with our 2018 baseline of 25 million cubic metres. The reduction was mainly a result of the conversion of the Tabangao refinery in the Philippines to a terminal and decreased water use at Shell Energy and Chemicals Park Singapore, following improvements to water-based cooling systems and the decommissioning of some processing units.

FRESH WATER WITHDRAWN AND CONSUMED [A]

million cubic metres



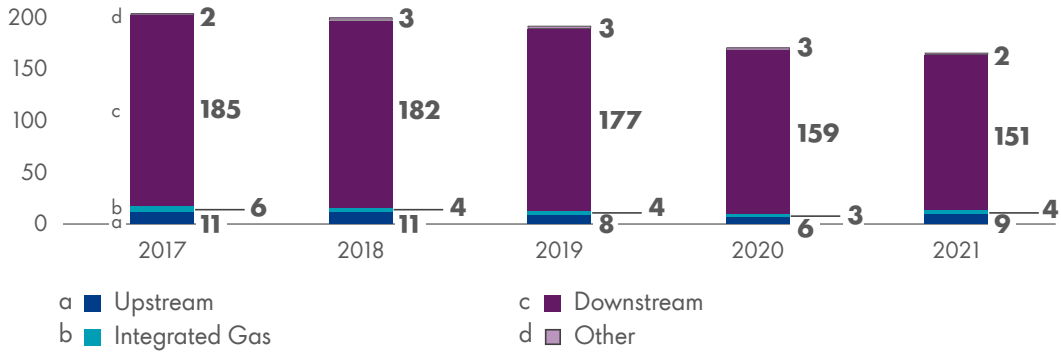
[A] Fresh water figures do not include once-through cooling water.

In 2021, our overall intake of fresh water decreased to 166 million cubic metres, compared with 171 million in 2020, mainly driven by the shutdown of the Shell Convent Refinery (USA) in late 2020.

Around 90% of our fresh-water intake in 2021 was used for manufacturing oil products and chemicals, with the balance mainly being consumed in oil and gas production.

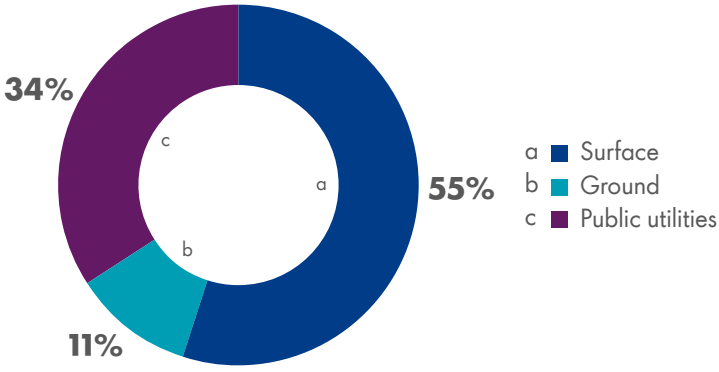
FRESH WATER WITHDRAWN BY BUSINESS

million cubic metres



FRESH WATER WITHDRAWN BY SOURCE IN 2021

percentage



Of our fresh-water intake, 34% was from public utilities, such as municipal water supplies. The rest was taken from surface water such as rivers and lakes (55%) and groundwater (11%).

In 2021, we conducted a pilot project looking at approaches to water stewardship, which will help us develop a methodology that we can apply more widely across our businesses in 2022 to improve water efficiency and set further goals to reduce fresh-water use.

WASTE WATER AND PRODUCED WATER

We track low-level concentrations of oil, grease and other hydrocarbons within water returned to the environment from the day-to-day running of our facilities (referred to as "discharges to surface water"). We work to minimise these discharges according to local regulatory requirements and our own standards. Where possible, we look for ways to treat water from our operations using natural solutions, such as constructed wetlands.

In 2021, the combined total of hydrocarbons discharged to surface water across all our facilities decreased to 1.0 thousand tonnes, compared with 1.4 thousand tonnes in 2020. The majority of the reduction was the result of improvements made by the Shell Petroleum Development Company of Nigeria Ltd (SPDC) and an ongoing programme at Shell Energy and Chemicals Park Singapore to minimise oil discharges.

In 2021, we disposed of 81 million cubic metres of produced water, which represents a decrease of 8% from 88 million cubic metres in 2020. This was mainly due to reduced produced water discharges at SPDC (Nigeria).

Find out more about water use at www.shell.com/sustainability/environment/water.

More in this report Sustainability at Shell | Our approach to respecting nature
More on Shell websites Our strategy: Powering Progress | Water

AIR QUALITY

POWERING **PROGRESS**

We are helping to improve air quality by reducing emissions from our operations and providing cleaner ways to power transport and industry.

CLEANER TRANSPORT OPTIONS

We are developing a range of lower-emission choices for customers – from electric vehicle charging points to hydrogen – to help people and companies use cleaner modes of transport. For heavy-duty road transport, we offer liquefied natural gas (LNG) as a fuel and gas-to-liquids products, which help reduce sulphur emissions, particulates and nitrogen oxide compared with oil-based products.

SULPHUR OXIDE, NITROGEN OXIDE AND VOLATILE ORGANIC COMPOUND EMISSIONS

We follow our own standards and those of local regulators to manage airborne pollutants in our oil and gas production and processing, for example emissions of nitrogen oxides, sulphur oxides and volatile organic compounds.

Our sulphur oxide (SOx) emissions in 2021 decreased to 32 thousand tonnes, compared with 36 thousand tonnes in 2020. This was mainly because of lower emissions from our Shell Energy and Chemicals Park in Singapore as a result of maintenance and permanent shutdown of some units and reduced flaring of acid gas at our Pearl GTL plant in Qatar. This decrease was partly offset by higher SOx emissions at our Scotford upgrader in Canada due to operational issues in the first half of 2021.

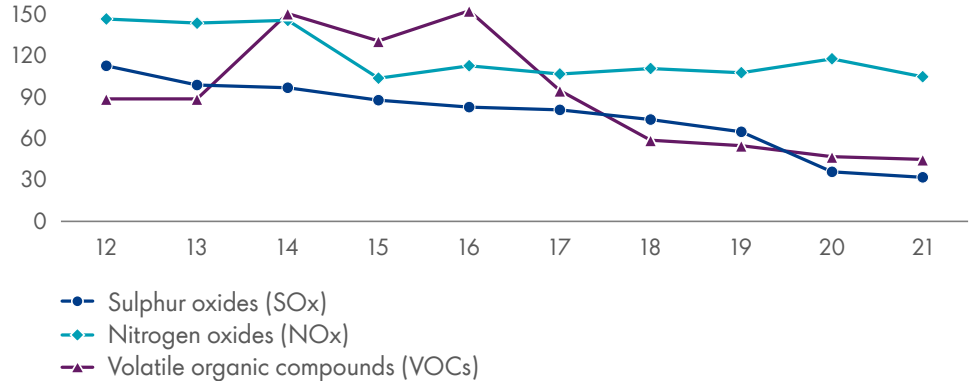
Our nitrogen oxide (NOx) emissions decreased from 118 thousand tonnes in 2020 to 105 thousand tonnes in 2021, in part because of fewer ships operated by Shell and lower contractor transport emissions in Nigeria.

Our emissions of volatile organic compounds (VOCs) decreased to 45 thousand tonnes in 2021 from 47 thousand tonnes in 2020. Reductions were in part due to reduced emissions from SMDS (Malaysia), divestments in Canada and the USA, and the fact that Shell no longer operates two facilities in Malaysia. The reductions were partially offset by higher emissions in Nigeria because of increased flaring by Shell Nigeria Exploration and Production Company Limited (SNEPCo) and higher emissions for ships operated by Shell resulting from changes in emission factors for engines.

To find out more about air quality, visit www.shell.com/sustainability/environment/air-quality.

ACID GASES AND VOLATILE ORGANIC COMPOUNDS

thousand tonnes



More in this report Sustainability at Shell | Our approach to respecting nature

More on Shell websites Our strategy: Powering Progress | Methane emissions | Greenhouse gas emissions | Reducing Methane Emissions in Shale Oil and Gas | Air Quality

We aim to be a good neighbour wherever we work, by contributing to the well-being of communities.

POWERING LIVES

Our Powering Progress strategy means powering lives and livelihoods through our products and activities, and by supporting an inclusive society.

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55 WORKER WELFARE
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56 MANAGING OUR IMPACT ON PEOPLE

OUR APPROACH TO POWERING LIVES

Every year, we spend tens of billions of dollars on goods and services in the communities where we operate. Our activities also generate revenues for governments through the taxes and royalties we pay and the sales taxes we collect on their behalf. This helps fund health care, education, transport and other essential services.

We try to make a positive difference to countries and communities by providing training and skills. This supports local economic development and livelihoods. And we strengthen local economies by promoting entrepreneurship, innovation and meaningful employment through programmes including Shell LiveWIRE, our enterprise development programme.

The supply of affordable, reliable and sustainable energy is also crucial for addressing global challenges, including those related to poverty and inequality. That is why we are working to provide more energy to those who do not have it today.

Our operations support countries and communities. We employ people in more than 70 countries, providing income and other benefits such as health care and pensions.

More in this report Providing lower-carbon electricity | Letter from the CEO | Our Powering Progress targets
More on Shell websites Access to energy

PROVIDING ACCESS TO ENERGY

POWERING **PROGRESS**

Our ambition, by 2030, is to provide reliable electricity to 100 million people in emerging markets who do not yet have it.

INVESTING IN ENERGY ACCESS

Our energy access team is working to deliver our ambition by improving the reliability of existing power supply to on-grid customers and providing power to off-grid customers and communities who do not yet have it. We are seeking strategic partnerships with governments, utilities, developers, banks, and investors to address local challenges and opportunities, and progress towards achieving our ambition to power emerging markets.

In 2021, Shell's commitment was registered in the UN Energy Compacts, a collection of voluntary commitments from member states and companies, governments, non-governmental organisations (NGOs) and others, with the specific actions they will take to advance progress on UN Sustainable Development Goal 7 (access to affordable, reliable, sustainable, and modern energy for all) and net-zero emissions.

Read more about our commercial energy access business at www.shell.com/energy-and-innovation/new-energies/energy-access.

SOCIAL PROGRAMMES

Separate to our commercial ambition, we invest in social programmes that benefit communities where we work. Through these voluntary initiatives, we work with partner organisations to help individuals and communities access reliable electricity to improve lives and generate greater economic opportunity.

In 2021, we continued to develop programmes to improve access to energy in Ethiopia, Mozambique, Pakistan and South Africa. COVID-19 continued to impede the delivery of access to energy projects in many locations – primarily due to restrictions on movement within and between countries.

To understand the impact of our projects, we commissioned an evaluation of seven of our access to energy projects in Canada, China, Malaysia, Myanmar, Pakistan, the Philippines, and Tanzania. A key finding of the evaluation was that 74% of participants felt their quality of life was improved. We have also identified several areas where we need to do better, such as an improved feedback mechanism for communities.

Read more about how our social investment programmes help to increase access to energy at www.shell.com/sustainability/communities/access-to-energy.

More in this report Providing lower-carbon electricity | Letter from the CEO | Our Powering Progress targets
More on Shell websites Building an energy access business | Access to energy

WORKING WITH OUR SUPPLIERS

SUPPLY CHAIN

POWERING **PROGRESS**

Supply chain: We will include requirements in our purchasing policies to reflect our environmental framework, and take the energy efficiency, material efficiency and sustainability of products into consideration in our purchases.

Shell aims to work with suppliers, including contractors, that behave in an economically, environmentally and socially responsible manner, as set out in our Shell General Business Principles and Shell Supplier Principles. In 2021, Shell spent around $37.5 billion on goods and services from around 24,000 suppliers globally.

We continually work with our suppliers to find ways to reduce greenhouse gas emissions across our supply chains. In 2021, we rolled out a new digital platform, Shell Supplier Energy Transition Hub, free of charge to our supply chain and any other interested company. The platform enables them to set emission ambitions and track performance, share best practice and exchange emissions data with their own supply chains. By the end of 2021, 258 of our suppliers had joined the platform, 103 of which have already set emission reduction targets.

Read more about how we work with contractors and suppliers at www.shell.com/business-customers/shell-for-suppliers.

More in this report Respecting human rights | Preparing for emergencies
More on Shell websites Our strategy: Powering Progress | Shell for suppliers | Supplier Principles

LOCAL CONTENT

We want to make a positive difference to countries and local communities where we operate. We do this by creating jobs, training people, supporting local businesses and buying goods and services from local suppliers – collectively referred to as local content.

SHELL LOCAL CONTENT ACTIVITIES IN 2021

$37.5 billion
spent globally on goods and services

63%
spent in Canada, Germany, the Netherlands, the UK and the USA

$4.2 billion
spent in countries where gross domestic product is less than $15,000 a year per person [A]

88.1%
spent in these low-income countries with local suppliers

[A] According to the UN Development Programme's Human Development Index 2019

In 2021, 84.8% of the $37.5 billion we spent on goods and services was purchased from suppliers based in the same country of operation, also called local procurement. About 63% of our procurement was in Canada, Germany, the Netherlands, the UK and the USA, of which 83.5% was spent with local suppliers.

We estimate that around $4.2 billion was spent in countries that, according to the UN Development Programme's Human Development Index 2019, have a gross domestic product of less than $15,000 a year per person. In these countries, Shell companies spent around 88.1%, or around $3.7 billion, with local suppliers.

Discover more about how we work to support the countries in which we operate in the Community skills and entrepreneurship section and at www.shell.com/sustainability/communities/local-employment-and-enterprise.

More in this report Respecting human rights | Preparing for emergencies
More on Shell websites Our strategy: Powering Progress | Shell for suppliers | Supplier Principles

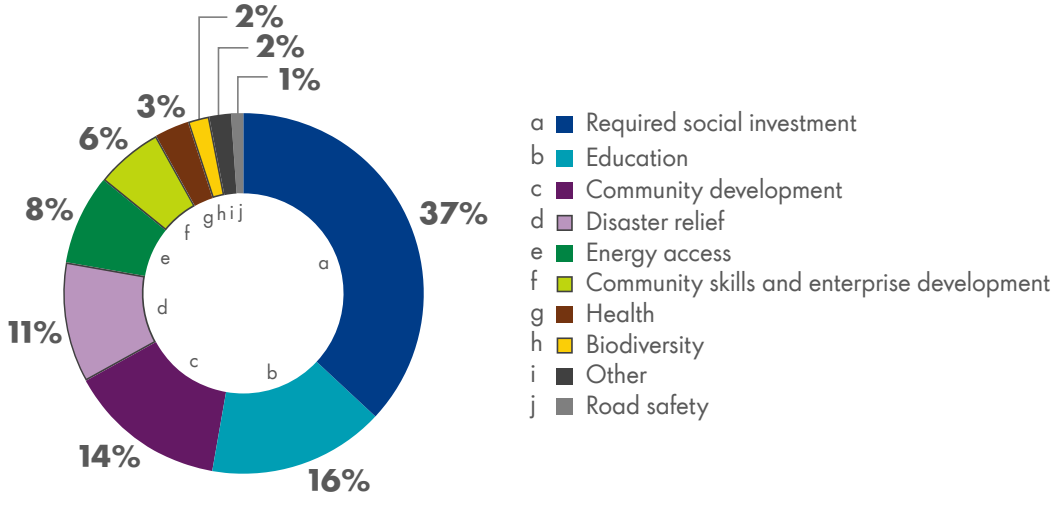
CONTRIBUTING TO COMMUNITIES

SOCIAL INVESTMENT

Our activities contribute to economies through taxes, jobs and business opportunities. We also make social investments in areas determined by local community needs and priorities. This investment is sometimes voluntary, sometimes required by governments, or part of a contractual agreement. In 2021, we spent almost $149 million on social investment, of which 37% was required by government regulations or contractual agreements. We spent the remaining $94 million (63%) on voluntary social investment.

SOCIAL INVESTMENT BY THEME

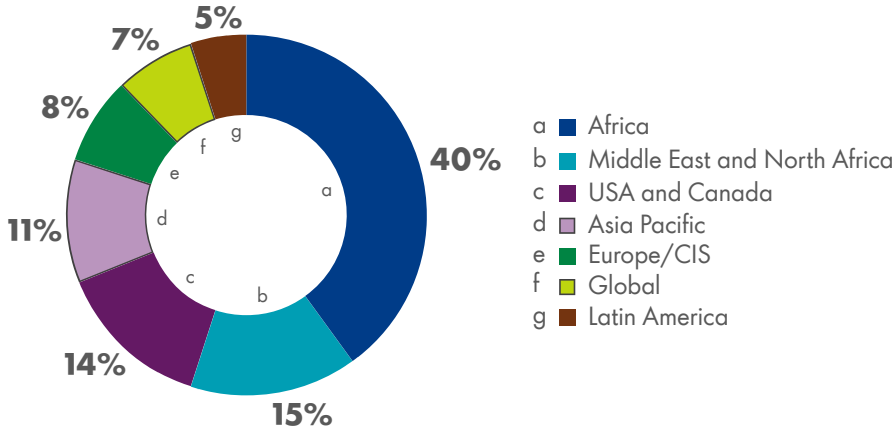
percentage



Around $72 million of our total social investment spend in 2021 was in countries that, according to the UN Development Programme's Human Development Index 2019, have a gross domestic product of less than $15,000 a year per person.

SOCIAL INVESTMENT BY REGION

percentage



Find out more about our social investment at www.shell.com/sustainability/communities.

More in this report Providing access to energy | Community skills and entrepreneurship

More on Shell websites Our strategy: Powering Progress | People and communities | Working with communities | Generating prosperity for countries and communities

COMMUNITY SKILLS AND ENTREPRENEURSHIP

Our community skills and entrepreneurship programmes benefit local communities where we operate by creating employment opportunities and contributing to economic development, while adding value to our supply chain. In 2021, around 26,700 people participated in and more than 700 businesses were supported by our skills development and entrepreneurship programmes. In 2021, our community skills programmes helped more than 1,300 people to gain employment immediately following the training.

Shell has two global entrepreneurship programmes – Shell LiveWIRE and Shell StartUp Engine.

Shell's LiveWIRE helps entrepreneurs turn their ideas into reality and operates in 18 countries. In 2021, Shell LiveWIRE trained more than 3,600 people around the world and helped to create more than 2,270 jobs. The programme supported around 670 existing businesses and helped create around 125 new businesses, with 19 Shell LiveWIRE-supported businesses entering our supply chain in 2021.

Shell StartUp Engine is a global innovation programme for entrepreneurs in the energy industry and supports early-stage start-ups in areas such as renewables, energy storage, smart grids and electric mobility. In 2021, the programme was delivered in the UK, France, Singapore, Brazil and the Netherlands (New Energy Challenge), with 40 start-ups receiving support.

Find out more about community skills and entrepreneurship in the Local content section and at www.shell.com/sustainability/communities/local-employment-and-enterprise.

More in this report Social investment | Providing access to energy

More on Shell websites

Our strategy: Powering Progress | Supporting enterprise development and entrepreneurs | Local employment and enterprise | Buying locally and encouraging local suppliers

CONTRIBUTING TO NIGERIA'S ECONOMY

Shell's Nigerian businesses support the development of local communities and companies. The businesses in which Shell has interests employed 2,500 people directly in 2021 and provided jobs for many others in supplier networks. In 2021, Shell Companies in Nigeria (SCiN) awarded contracts worth $800 million to Nigerian-registered companies.

SOCIAL AND ECONOMIC CONTRIBUTION OF SHELL COMPANIES IN NIGERIA

2,500
people employed by Shell, plus more than 8,500 contractors

97%
employees in Nigeria who are Nigerian

$986 million
royalties and corporate taxes paid to the Nigerian government in 2021 (SPDC $424 million and SNEPCo $562 million)

$800 million
worth of contracts were awarded to Nigerian-registered companies

19
health-care projects supported by SPDC [A] JV and SNEPCo [B]

3,200+
university grants awarded by SPDC JV and SNEPCo since 2016

[A] The Shell Petroleum Development Company of Nigeria Limited (SPDC), which has a 30% interest in the SPDC joint venture (SPDC JV) and produces oil and gas in the Niger Delta.
[B] The Shell Nigeria Exploration and Production Company Limited (SNEPCo), which operates in the deep waters of the Gulf of Guinea.

In addition to paying $986 million in 2021 royalties and corporate taxes to the Nigerian government (SPDC $424 million; SNEPCo $562 million), Shell Companies in Nigeria (SCiN) also contributed $33.82 million in direct social investment. Social investment was mainly in projects related to community, health, education, road safety and enterprise programmes. These projects are often implemented in partnership with local authorities.

In 2021, we launched Shell Energy Nigeria, which aims to develop new gas distribution solutions and deliver competitive and reliable energy for power generation and industrial use across the country.

Read more about Shell's economic contribution in Nigeria at www.shell.com.ng/nigeria-briefing-notes.

More in this report Spill response and prevention in Nigeria | Our approach to safety | Providing access to energy
More on Shell websites Our strategy: Powering Progress | Shell Nigeria | Nigeria Briefing Notes | Buying locally and encouraging local suppliers

EDUCATION IN SCIENCE, TECHNOLOGY, ENGINEERING AND MATHS

We actively support science, technology, engineering and maths (STEM) through a range of programmes in more than 20 countries. NXplorers, our flagship STEM programme, aims to help young people develop complex and creative thinking to bridge the skills gap. NXplorers is now active in 18 countries, and engaged more than 60,000 students in 2021.

Read more about our contribution to STEM at www.shell.com/sustainability/communities/education.

More in this report Community skills and entrepreneurship | Providing access to energy
More on Shell websites Our strategy: Powering Progress | Education

DIVERSITY, EQUITY AND INCLUSION

POWERING **PROGRESS**

We are focusing on removing barriers and creating equality of opportunity in four strategic priority areas: gender; race and ethnicity; lesbian, gay, bisexual and transgender (LGBT+); and enablement and disabilities inclusion, as set out in our powering lives commitments to diversity and inclusion.

- Shell is working towards achieving 35% representation of women in our senior leadership positions by 2025 and 40% by 2030.
- We aim to increase racial and ethnic representation across our workforce so that we better reflect the communities in which we work and live.
- At Shell, we seek to provide a safe, caring and inclusive environment for LGBT+ and PWD (people with disabilities) staff so that they can be themselves and reach their full potential.
- By 2030, we will make our global network of service stations more inclusive and accessible to customers with physical disabilities.

EMPLOYEE ENGAGEMENT

The Shell People Survey is one of our principal tools to measure employee engagement, motivation, affiliation and commitment to Shell. In 2021, the response rate was 83%, a decrease of 3.1 percentage points compared with 2020. The average employee engagement score was 75 points out of 100, a decrease of 3.0 percentage points compared with 2020. The decrease was mainly due to lower scores in the reputation, rewards and benefits sections of the survey. This reflects the uncertainty felt by many during our reorganisation in 2021 and the daily challenges of working with COVID-19.

Read more about employee engagement in the Annual Report.

WORKFORCE DIVERSITY, EQUITY AND INCLUSION

Our diversity, equity and inclusion approach focuses on hiring, developing and retaining the best people. A diverse workforce, supported by an inclusive and caring environment that respects and nurtures people, is a way to improve our safety and business performance.

We aim to increase racial and ethnic representation across our workforce to better reflect the communities in which we work and live. In the USA, about 33.2% of our workforce are people of colour. In the UK, 21.5% of our employees identify as being from an ethnic minority group. Ethnicity declaration is voluntary in the UK and calculations are based on a survey declaration rate of 81%.

We also aim to materially increase our purchasing from diverse suppliers to help build the communities in which we work.

At the end of 2021, the proportion of women in senior leadership positions was 29.5%, an increase of 1.7 percentage points compared with the end of 2020. We had been working to achieve 30% representation of women in senior leadership positions by the end of 2021, and we aim to achieve 35% by 2025 and 40% by 2030. Shell Business Operations centres hired 2,742 people in 2021, of which 51% were women. Shell hired 155 graduates, of which 47% were women.

We promote equal opportunity and create an environment where people feel included, regardless of sexual orientation or gender identity. This year, we were recognised as a "Top Scorer" (92.4%) and "Advocate" in the Workplace Pride Global Benchmark 2021. We also launched campaigns aimed at supporting the LGBT+ community in 14 countries in 2021, and more than 14 countries celebrated International Coming Out Day.

We use our Shell People Survey as a key measure of success for diversity, equity and inclusion. In 2021, the survey showed 80 points out of 100 for all questions relating to Diversity and Inclusion, with the new question 'I feel like I belong at Shell' scoring 77.

Read more about diversity, equity and inclusion in the Annual Report.

DISABILITY INCLUSION AND ENABLEMENT

We are also taking steps to provide a better experience for our customers with physical disabilities. For example, fuelService launched an app in partnership with Shell which allows drivers with any disability that makes refuelling difficult to alert petrol stations in advance and request assistance. Shell currently offers the service at more than 3,600 stations across ten countries.

Read more about disability inclusion and enablement in the Annual Report.

Read more about diversity, equity and inclusion at www.shell.com/about-us/diversity-and-inclusiveness and at www.shell.com/diversity.

OUR PEOPLE IN 2021

82,000
employees at December 31, 2021

>70
countries in which we operate

271,000
formal training days for employees and joint-venture partners

33%
female employees

50%
women on the Board of Directors

25%
women on the Executive Committee

29.5%
women in senior leadership positions

1,292
experienced people joined Shell (34% female)

155
graduate hires (47% female)

[A] All metrics except the employees' metric exclude the employees in certain Upstream, Renewables and Energy Solutions and Downstream companies that maintain their own HR systems.

More in this report Respecting human rights | Ethical leadership | Our Powering Progress targets
More on Shell websites Our strategy: Powering Progress | Contributing to a Diverse, Equitable and Inclusive World | Shell in the UK Diversity Pay Gap Report

WORKER WELFARE

In 2021, we continued to take steps to improve our approach to worker welfare. We published Shell's Approach to Human Rights, which sets out our commitment to worker welfare and respecting the rights of people and communities. It describes how we integrate human rights and worker welfare into our policies and processes, and how we provide access to remedy through our community feedback mechanisms and the Shell Global Helpline. Our approach is informed by the 10 Building Responsibly Worker Welfare principles.

Read more about worker welfare at www.shell.com/sustainability/communities/worker-welfare.

More in this report Working with our suppliers | Diversity, equity and inclusion | Our Powering Progress targets
More on Shell websites Powering Progress – transitioning to net-zero emissions | Human rights

RESPECTING HUMAN RIGHTS

OUR APPROACH TO HUMAN RIGHTS

We respect human rights in all aspects of doing business and have embedded human rights in our Shell General Business Principles, Code of Conduct and Shell Supplier Principles. Our approach is informed by the UN Guiding Principles on Business and Human Rights.

We focus our effort on four key areas, where human rights are critical to the way we operate and where we have identified the risks are highest for potential impact on human rights. These four key areas are labour rights, communities, supply chains and security. In 2021, we continued to take steps to improve our approach to human rights. We published Shell's Approach to Human Rights in connection with the launch of our Powering Progress strategy.

Read more about our human rights policies and focus areas at www.shell.com/human-rights.

MODERN SLAVERY

Shell is opposed to all forms of modern slavery. Such exploitation is against our commitment to respect human rights as set out in the UN Universal Declaration of Human Rights and the International Labour Organization's Declaration on Fundamental Principles and Rights at Work. We follow the UN Guiding Principles on Business and Human Rights.

We contributed to IPIECA's guidance on "Labour rights risk identification in the supply chain", which was launched in 2021. The publication aims to help companies identify and assess risks, giving examples of risk-based screening methodologies and background resources on human rights due diligence.

Read more about our approach in our statement under the UK Modern Slavery Act at www.shell.com/uk-modern-slavery-act.

SECURITY PRACTICES

We work to maintain the safety, security and human rights of our employees, contract staff and local communities. Shell Group companies have implemented the Voluntary Principles on Security and Human Rights (VPSHR) since their development in 2000. We incorporate the VPSHR into our core security-related processes and contracts. Security staff and contractors are trained in the implementation of the Voluntary Principles initiatives.

Read more about our approach to human rights and security at www.shell.com/sustainability/transparency/human-rights and more about our implementation of the VPSHR at www.shell.com/vpshr.

More in this report Working with our suppliers | Diversity, equity and inclusion | Our Powering Progress targets

More on Shell websites Powering Progress – transitioning to net-zero emissions | Human rights

MANAGING OUR IMPACT ON PEOPLE

ENGAGING COMMUNITIES

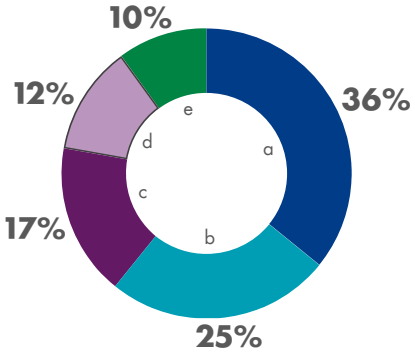
We engage with communities because this is essential to understanding their priorities and concerns. We have a network of around 100 professionals with community engagement responsibilities who are the bridge between Shell and our local communities. Early in 2020, we launched a new global community feedback tool. This enables us to better track and respond to queries that we receive locally and provides insights at the global level.

Read more about our work with communities at www.shell.com/sustainability/communities/working-with-communities.

FEEDBACK RECEIVED

COMMUNITY FEEDBACK

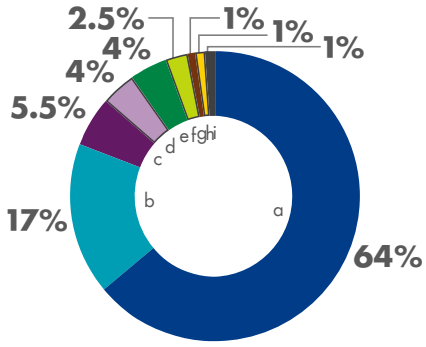
by type



a Complaints
b Requests
c Questions
d Positive feedback
e Other

COMPLAINTS RECEIVED GLOBALLY [A]

by category

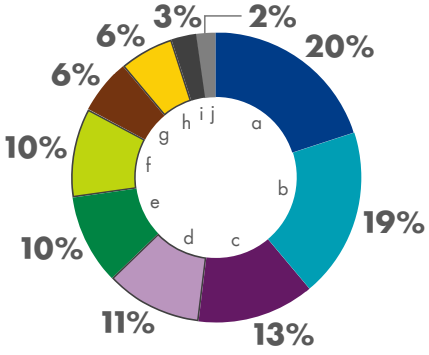


a Social
b Environment
c Business integrity, contractual and commercial
d Uncategorised
e Safety
f Health
g Other
h Security
i Unrelated to Shell

[A] Chart excludes clusters of complaints regarding earthquakes in the Netherlands, which are managed outside of Shell.

ENVIRONMENTAL COMPLAINTS

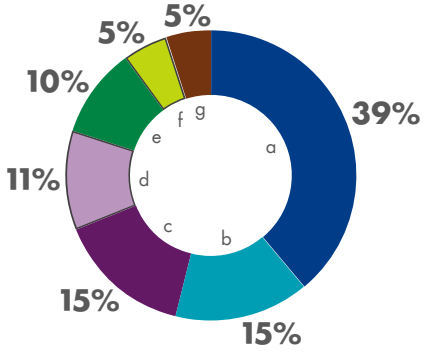
by sub-category



a Noise
b Flaring
c Odour
d Air quality
e Ecosystem, habitat, biodiversity
f Other
g Soil and water contamination
h Dust
i Water quantity
j Spills

SOCIAL COMPLAINTS

by sub-category



a Land and resettlement
b Local content
c Labour
d Other
e Engagement
f Social investment
g Impact

INDIGENOUS PEOPLES

Our activities can affect Indigenous Peoples who hold specific rights for the protection of their cultures, traditional ways of life and special connections to land and water. We seek the support and agreement of Indigenous peoples potentially affected by our projects. We do this through dialogue and impact management processes.

Shell has also developed a public position statement on Free Prior and Informed Consent (FPIC), a principle recognised in the UN Declaration on the Rights of Indigenous Peoples. It entails open dialogue, good-faith negotiations, and where appropriate, the development of agreements that address the needs of Indigenous Peoples.

Read more about our work with Indigenous Peoples at www.shell.com/sustainability/communities/working-with-communities.

More in this report Community skills and entrepreneurship | Respecting human rights | Our Powering Progress targets
More on Shell websites Our strategy: Powering Progress | Working with communities

CULTURAL HERITAGE

Preserving cultural heritage is an important part of our efforts to manage our social impact. Cultural heritage refers to places of archaeological, historical, cultural, artistic and religious significance. It also includes the preservation of unique environmental features, cultural knowledge and traditional lifestyles.

Our approach starts with considering how to avoid or minimise our impact on cultural heritage. This can involve carrying out archaeological assessments to inform, among other things, project design and site selection. We then develop chance find procedures to deal with previously unknown heritage resources that may be discovered during construction. We train staff and contractors to make them fully aware of these resources to give them the authority to halt work if necessary.

Read more about our approach to cultural heritage at www.shell.com/sustainability/communities/working-with-communities.

More in this report Community skills and entrepreneurship | Respecting human rights | Our Powering Progress targets
More on Shell websites Our strategy: Powering Progress | Working with communities

INVOLUNTARY RESETTLEMENT

We sometimes require temporary or permanent access to areas of land or sea where people are living or working. We aim to avoid resettlement wherever possible, but where resettlement is unavoidable, we work with local communities to help them resettle and maintain, or improve, their standard of living in accordance with international standards for resettlement (notably International Finance Corporation (IFC) Performance Standard 5 on land acquisition and involuntary resettlement). Our support may also include helping these communities to establish alternative livelihoods.

Read more about our approach to involuntary resettlement at www.shell.com/sustainability/communities/working-with-communities.

More in this report Community skills and entrepreneurship | Respecting human rights | Our Powering Progress targets
More on Shell websites Our strategy: Powering Progress | Working with communities

We are continuing to provide the energy the world needs today, while increasing our investments in cleaner energy.

GENERATING SHAREHOLDER VALUE

Our Powering Progress strategy generates value for our shareholders. It provides the financial strength to transform our company as the world makes the transition to cleaner energy.

60 OUR BUSINESS ACTIVITIES
61 EMBEDDING SUSTAINABILITY INTO PROJECTS
62 PRODUCING OIL AND NATURAL GAS
63 NON-OPERATED VENTURES
63 DIVESTED VENTURES

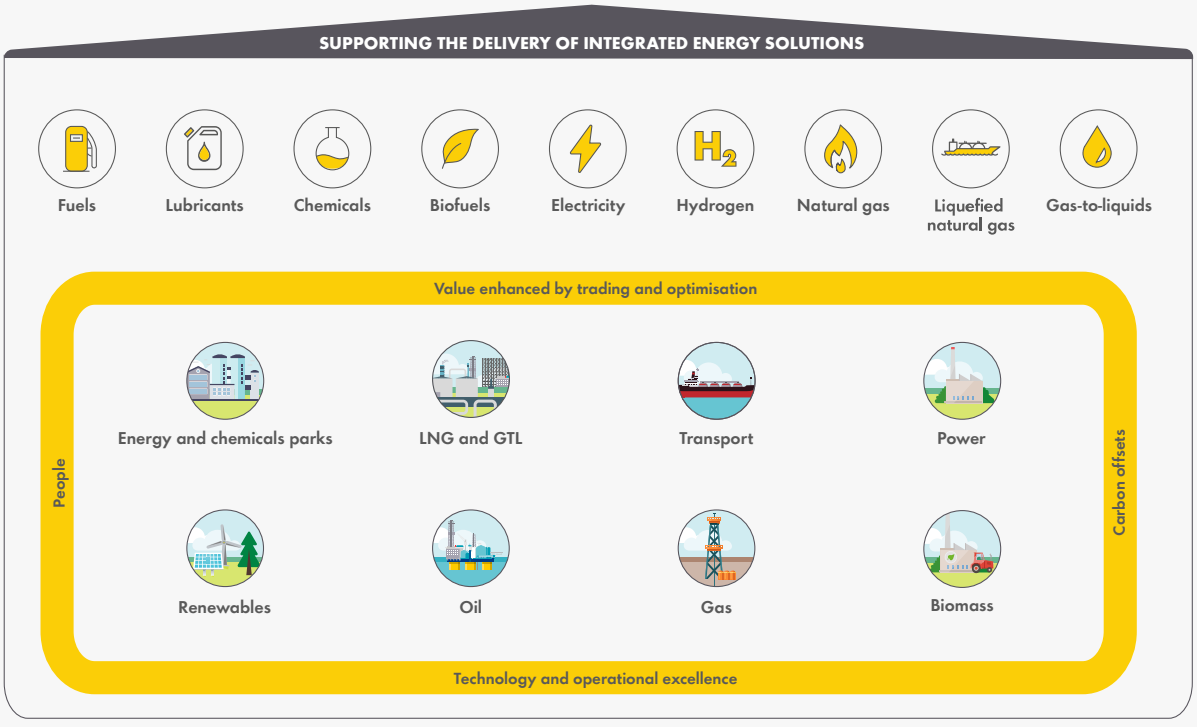
OUR BUSINESS ACTIVITIES

Energy use

Customer sectors

Energy solutions

Assets and capabilities



More in this report Our Powering Progress targets | Letter from the CEO
More on Shell websites Powering Progress – transitioning to net-zero emissions

EMBEDDING SUSTAINABILITY INTO PROJECTS

Safety and the impact of our activities on the environment and communities are vital considerations when we plan, design and operate our projects and facilities. The mandatory requirements in our Health, Safety, Security, Environment and Social Performance (HSSE & SP) Control Framework help to ensure projects and facilities are designed and constructed safely, responsibly and in a consistent way.

At a project level, assessing climate-related risks is an important part of making initial investment decisions. Projects under development that are expected to have a material greenhouse gas impact must meet our internal carbon performance standards or industry benchmarks. This indicates that they will be able to compete and prosper in a future where society aims to limit overall carbon emissions.

We require projects and facilities that we operate to have a greenhouse gas (GHG) and energy management plan in place if they are expected to produce, at peak, more than 50,000 tonnes of carbon dioxide equivalent emissions. We focus improvement efforts on the most carbon-intensive projects, monitoring performance against applicable standards and running carbon competitiveness reviews to help us continue to improve. We conduct impact assessments for every major project and consider the economic, social, environmental and health opportunities and risks.

Read more about how we embed sustainability into the life of a project at www.shell.com/sustainability.

Read about our major projects at www.shell.com/about-us/major-projects.

DECOMMISSIONING AND RESTORATION

Decommissioning is part of the normal life cycle of every oil and gas structure and we work hard to do it safely and responsibly. This includes restoring the surroundings of onshore and offshore platforms and facilities in line with relevant legislation, while taking our own environmental standards into account.

We have decommissioning activities under way in Brunei, India, Malaysia, the Netherlands, the UK and the USA. We seek to reuse, repurpose and recycle materials in decommissioning. At the end of 2021, we reported $22.1 billion on our balance sheet for current and non-current decommissioning and other provisions, which is how we account for future decommissioning expenses (see our Annual Report).

Read more about Shell's approach to decommissioning at www.shell.com/sustainability/decommissioning-and-restoration.

More in this report Our Powering Progress targets | Letter from the CEO

More on Shell websites Powering Progress – transitioning to net-zero emissions

PRODUCING OIL AND NATURAL GAS

POWERING **PROGRESS**

We believe our annual oil production peaked in 2019, and we expect our total oil production to decline by 1-2% a year until 2030.

The most ambitious scenarios show that as the energy system transitions, the world will continue to need oil and gas for decades. We are focusing our Upstream activities on fewer, existing positions and on generating value over volume.

We expect an annual decline in oil production because we are reducing the level of our investment in Upstream production activities. Emissions from our Upstream operations make up a small proportion of our overall Scope 1 and Scope 2 emissions, and they have already reduced by more than 25% since 2016.

Natural gas, piped and liquefied natural gas (LNG), provides lower-carbon energy. The IEA estimates that global natural gas operations have an average methane leakage rate of 1.7%. At this rate, natural gas emits over its life cycle around 45% lower greenhouse gas emissions than coal when used to generate electricity. Natural gas can also make a significant contribution to lowering greenhouse gas emissions in industries, such as the iron and steel sector, where switching to natural gas from coal could lead to around 36% lower emissions.

Read more about our oil and gas production volumes in the Annual Report.

Read about our major projects at www.shell.com/about-us/major-projects and deep-water production at www.shell.com/energy-and-innovation/deep-water.

Read more about natural gas at www.shell.com/energy-and-innovation/natural-gas.

SHALE OIL AND GAS

We work to unlock shale resources safely and responsibly through strict adherence to our Onshore Operating Principles of Safety, Air, Water, Footprint and Community. We conduct our operations in a manner that aims to protect air quality and reduce emissions. For example, we are implementing greenhouse gas abatement projects for existing and new facilities, such as using renewable power supply and energy efficiency improvement initiatives.

In September 2021, we reached an agreement for the sale of our shales business in the Permian Basin, USA. The transaction was completed on December 1, 2021, transferring Shell's interest in the Permian to ConocoPhillips. As a result of this divestment, Shell's remaining activity in shales production is in Canada and Argentina.

Read more about our shale oil and gas production at www.shell.com/energy-and-innovation/shale-oil-and-gas.

ARCTIC

We do not plan to pursue new oil exploration leases offshore in the Arctic Circle. We hold interests in a small number of exploration licences in Arctic areas of the USA, Norway and Russia. We evaluate other opportunities on a case-by-case basis, in line with our strategic objectives.

We intend to exit our interest in the Gydan joint venture with Gazprom Neft (Shell interest 50%) to explore and develop blocks in the Gydan peninsula, in north-western Siberia. The project is in the exploration phase, with no production.

Read more about our activities at www.shell.com/sustainability.

More in this report Our Powering Progress targets | Letter from the CEO
More on Shell websites Powering Progress – transitioning to net-zero emissions

NON-OPERATED VENTURES

Shell often works in joint ventures with national and other international energy companies. More than half of Shell's joint ventures are not operated by Shell.

When entering into a venture operated by a partner, we require them to agree to and adopt key principles, policies and standards, including the Shell Commitment and Policy on Health, Safety, Security, Environment and Social Performance (HSSE & SP), or one equivalent to our own.

For more information about how we work with our joint ventures, see www.shell.com/sustainability.

More in this report Sustainability at Shell | Our standards and policies | Letter from the CEO
More on Shell websites Powering Progress – transitioning to net-zero emissions

DIVESTED VENTURES

Responsible divestments are a key part of transitioning our portfolio to deliver upon our Powering Progress strategy. In 2021, total divestment proceeds were approximately $15 billion. See the business sections in our Annual Report 2021 for details.

We carry out due diligence on potential buyers when divesting parts of our business. We collaborate with both in-house and external experts, where appropriate, to conduct checks and examine key attributes of potential buyers.

Find out more about how we divest at www.shell.com/sustainability.

More in this report Sustainability at Shell | Our standards and policies | Letter from the CEO
More on Shell websites Powering Progress – transitioning to net-zero emissions

The Shell name can be traced back to seashells imported from the Far East during the late 19th Century.

OUR PERFORMANCE DATA

Each year, we measure our ESG performance and report on the safety of our operations, our impact on the environment and our contribution to communities.

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67 OUR POWERING PROGRESS TARGETS
68 SAFETY DATA
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78 OTHER ENVIRONMENTAL DATA
83 SOCIAL DATA

ABOUT OUR DATA

We began reporting voluntarily on our environmental, safety and social performance with the first Shell Report in 1997. We support transparency and share information and data in this report and on www.shell.com.

There are inherent limitations to the accuracy of environmental, safety and social performance data. We recognise that our data will be affected by these limitations, so we continue to improve data integrity by strengthening our internal controls.

We provide all non-financial data in this report on a 100% basis for companies and joint ventures where we are the operator unless otherwise stated, in line with industry practice. We believe that this boundary best reflects regulatory requirements, as well as internal policies, for the management of potential health, safety, environmental and social impacts. We refer to the number of people employed or contracted on a full-time equivalent basis.

Operations acquired or divested during 2021 are included only for the period in which we operated these assets. Other data are collected from external sources, employee surveys and other internal sources as indicated. Some data in the social performance data table come from an internal survey completed by the senior Shell representative in each country. The accuracy of environmental and social data may be lower than that of data obtained through our financial systems.

We only include data in this report for 2021 that were confirmed by the end of March 2022. If incidents are reclassified or confirmed, or if significant data changes occur after preparation of this report, they will be updated in the following year's publication.

ASSURANCE

We have clear standards and reporting requirements for our health, safety, security, environment and social performance (HSSE & SP) data.

Shell companies are required to consider and adopt these standards, which define management roles and responsibilities, the scope of data at facilities and how data are calculated and collected. These standards are part of our HSSE & SP Control Framework.

To ensure we provide accurate information, our assurance process for HSSE & SP data is also a key element of the HSSE & SP Control Framework. Some examples of the assurance mechanisms in this process are:

- self-assessments at the facility level;
- internal audits at all levels of Shell;
- quarterly reviews and assessments of the data at all levels;
- an annual series of meetings between leaders at Group level and senior business managers to discuss outcomes and reporting parameters; and
- formal sign-off by Shell's senior country leaders.

The Carbon Reporting Committee (CRC), which was formed in 2021, is tasked with ensuring that greenhouse gas (GHG) emissions measures, both absolute emissions and carbon intensity, and associated metrics, comply with all regulatory and legal requirements.

The Report Review Panel of independent experts helps ensure our reporting is balanced, relevant and responsive to stakeholders' interests.

LRQA Limited has provided limited assurance of our net carbon intensity (measured and reported using the Net Carbon Footprint methodology), Scope 1 and Scope 2 greenhouse gas (GHG) emissions data under operational control for 2021 and Scope 3 greenhouse gas emissions from energy products included in our net carbon intensity. Limited assurance means nothing has come to the auditor's attention that would indicate that the greenhouse gas data and information as presented in the Greenhouse Gas Assertion were not materially correct. The most recent assurance statements are available at www.shell.com/ghg.

Conversions into US and Canadian dollars are based on the average exchange rates for 2021.

More in this report Our Powering Progress targets | Our standards and policies | Letter from the CEO

More on Shell websites Powering Progress – transitioning to net-zero emissions

OUR STANDARDS AND POLICIES

SELECTED COMMITMENTS, POLICIES AND FRAMEWORKS

We have a number of codes, policies and assurance processes that define how we aim to operate in socially and environmentally responsible ways. These include:

- Shell General Business Principles
- Shell Code of Conduct
- Ethics and Compliance Manual
- Code of Ethics for Executive Directors and Senior Financial Officers
- Shell Supplier Principles
- Health, Safety, Security, Environment & Social Performance Commitment and Policy
- Health, Safety, Security, Environment & Social Performance Control Framework
- Health, Safety, Security, Environment & Social Performance assurance
- Human rights approach
- Voluntary Principles on Security and Human Rights
- Shell's ambition to be a net-zero emissions energy business
- Environmental framework
- Biodiversity commitments
- Purchasing statement: Sustainable sourcing of bio-components (PDF)
- Corporate political engagement (PDF)
- Shell's principles for producing tight/shale oil and gas

We also support a number of external voluntary codes.

REPORTING STANDARDS AND FRAMEWORKS

Our reporting is informed by a number of standards such as the IPIECA Sustainability Reporting Guidance and the Global Reporting Initiative (GRI). In addition, we map our disclosures against the Sustainability Accounting Standards Board's Oil and Gas Exploration and Production Standard, the World Economic Forum's Stakeholder Capitalism Metrics (core) and are a founding member of and a signatory to the United Nations Global Compact. In our Annual Report, we set out our climate-related financial disclosures consistent with all of the Task Force on Climate-related Financial Disclosures (TCFD) Recommendations and Recommended Disclosures.

- Global Reporting Initiative
- Task Force on Climate-related Financial Disclosures
- Sustainability Accounting Standards Board
- CDP
- IPIECA
- United Nations Global Compact
- United Nations Sustainable Development Goals

More in this report Our Powering Progress targets | Our standards and policies | Letter from the CEO

More on Shell websites Powering Progress – transitioning to net-zero emissions

OUR POWERING PROGRESS TARGETS

In February 2021, Shell launched Powering Progress, which sets out our strategy to accelerate the transition of our business to net-zero emissions, in step with society, purposefully and profitably. It is designed to integrate sustainability with our business strategy, in support of our purpose – to power progress together by providing more and cleaner energy solutions. Targets and commitments under Powering Progress include:

ACHIEVING NET-ZERO EMISSIONS

Working with our customers and across sectors to accelerate the transition to net-zero emissions.

- Our climate target is to become a net-zero emissions energy business by 2050, in step with society's progress in achieving the goal of the UN Paris Agreement on climate change.
- We have set targets to reduce the carbon intensity (Net Carbon Footprint) of the energy products we sell. This includes short-term targets of 3-4% by 2022, 6-8% by 2023, and 9-12% by 2024 (compared with 2016). It also includes medium- and long-term targets of 20% by 2030, 45% by 2035, and 100% by 2050 (compared with 2016), in step with society.
- In October 2021, we announced an absolute emissions reduction target of 50% by 2030, compared with 2016 levels on a net basis. This new target covers all Scope 1 and 2 emissions under Shell's operational control and complements our existing carbon-intensity targets.
- We have linked the pay of more than 16,500 staff to our target to reduce the carbon intensity of our energy products by 6-8% by 2023, compared with 2016.
- We believe our annual oil production peaked in 2019, and we expect our total oil production to decline by 1-2% a year until 2030.
- In 2022, we aim to invest $3 billion in our Renewables and Energy Solutions business. We aim to increase our power sales to 560 terawatts a year by 2030.
- Our aim is to use nature-based solutions to mitigate emissions of around 120 million tonnes of CO_2 per year by 2030.
- We seek to have access to an additional 25 million tonnes a year of carbon capture and storage (CCS) capacity by 2035 – equal to 25 CCS facilities the size of our Quest site in Canada.
- We have committed to bringing forward the target to eliminate routine gas flaring from our Upstream operated assets from 2030 to 2025. This is an acceleration of our previously stated obligation to the World Bank's Zero Routine Flaring by 2030 initiative.
- By 2025, we expect to have kept the methane emissions intensity of Shell-operated assets to below 0.2%.

RESPECTING NATURE

Protecting the environment, reducing waste and making a positive contribution to biodiversity.

Biodiversity

- Our ambition is to have a positive impact on biodiversity.
- Our new projects in areas rich in biodiversity – critical habitats – will have a net positive impact on biodiversity, starting implementation in 2021.
- Our nature-based solutions projects, which protect, transform or restore land, will have a net positive impact on biodiversity, starting implementation in 2021.
- We will replant forests, achieving net-zero deforestation from new activities, while maintaining biodiversity and conservation value, starting implementation in 2022.

Water

- Our ambition is to conserve fresh water by reducing consumption and increasing reuse and recycling.
- We will reduce the amount of fresh water consumed in our facilities, starting by reducing fresh-water consumption by 15% by 2025 compared with 2018 levels in areas where there is high pressure on fresh-water resources.
- We will assess options for further reduction goals by the end of 2022.

Circular economy and waste

- Our ambition is to use resources and materials efficiently and to increase reuse and recycling.
- We are aiming for zero waste by reducing waste generated and increasing reuse and recycling in our businesses and supply chains. We will set goals for waste reduction, reuse, and recycling by the end of 2022.
- We will work with our suppliers and contractors to help end plastic waste in the environment:
  - By 2030, we will increase the amount of recycled plastic in our packaging to 30% and ensure that the packaging we use for our products is reusable or recyclable.
  - We will increase the amount of recycled materials used to make our products, starting with plastics. Our ambition is to use one million tonnes of plastic waste a year in our global chemicals plants by 2025.

Air quality

- We are helping to improve air quality by reducing emissions from our operations and providing cleaner ways to power transport and industry.

Collaboration and reporting

We are strengthening external partnerships and improving transparency on performance.

- Supply chain: We will include requirements in our purchasing policies to reflect our environmental framework, and take the energy efficiency, material efficiency and sustainability of products into consideration in our purchases.
- External partnerships: We will ensure external partnerships inform key areas of development and delivery of our ambitions.
- External reporting: We will transparently report performance in our annual Sustainability Report.

POWERING LIVES

Powering lives through our products and activities, and by supporting an inclusive society.

- Our ambition, by 2030, is to provide reliable electricity to 100 million people in emerging markets who do not yet have it.
- We aim to increase racial and ethnic representation across our workforce so that we better reflect the communities in which we work and live.
- Shell is working towards achieving 35% representation of women in our senior leadership by 2025 and 40% by 2030.
- By 2030, we will make our global network of service stations more inclusive and accessible to customers with physical disabilities.
- At Shell, we seek to provide a safe, caring and inclusive environment for LGBT+ and PWD (people with disabilities) staff so that they can be themselves and reach their full potential.

More in this report Sustainability at Shell | Climate change and the energy transition | Letter from the CEO

More on Shell websites Powering Progress – transitioning to net-zero emissions

SAFETY PERFORMANCE DATA

Personal Safety [A]

	Unit	2021	2020	2019	2018	2017	IPIECA	SASB	GRI
Fatalities [B]	Number	**8**	0	7	2	2	SHS-3	EM-EP-320a.1	403-9
Employees	Number	**0**	0	3	0	0	SHS-3	EM-EP-320a.1	403-9
Contractors	Number	**8**	0	4	2	2	SHS-3	EM-EP-320a.1	403-9
Fatal accident rate	Number per 100 million hours	**1.7**	0.0	1.4	0.4	0.4	SHS-3	EM-EP-320a.1	403-9
Employees	Number per 100 million hours	**0.0**	0.0	1.6	0.0	0.0	SHS-3	EM-EP-320a.1	403-9
Contractors	Number per 100 million hours	**2.9**	0.0	1.2	0.6	0.6	SHS-3	EM-EP-320a.1	403-9
Serious Injury and Fatality (SIF) [C] [D]	Number	**32**	23	35	–	–	-	-	-
Employees	Number	**5**	5	9	–	–	-	-	-
Contractors	Number	**27**	18	26	–	–	-	-	-
Serious Injury and Fatality Frequency (SIF-F)	Number per 100 million hours	**6.9**	6.0	7.5	–	–	-	-	-
Employees	Number per 100 million hours	**2.7**	2.7	4.9	–	–	-	-	-
Contractors	Number per 100 million hours	**9.8**	6.8	7.8	–	–	-	-	-
Total recordable case frequency (TRCF)	Number per million hours	**0.9**	0.7	0.9	0.9	0.8	SHS-3	EM-EP-320a.1	403-9
Employees	Number per million hours	**0.5**	0.4	0.6	0.7	0.6	SHS-3	EM-EP-320a.1	403-9
Contractors	Number per million hours	**1.1**	0.9	1.1	1.0	0.9	SHS-3	EM-EP-320a.1	403-9
Lost time injury frequency (LTIF)	Number per million hours	**0.3**	0.2	0.3	0.3	0.2	SHS-3	EM-EP-320a.1	403-9
Employees	Number per million hours	**0.2**	0.2	0.3	0.2	0.2	SHS-3	EM-EP-320a.1	403-9
Contractors	Number per million hours	**0.4**	0.3	0.3	0.3	0.2	SHS-3	EM-EP-320a.1	403-9

[A] In line with industry standards, we distinguish three contract modes. Mode 1: contractor/supplier performs work under Shell's HSSE Management System (HSSE MS); Mode 2: contractor/supplier performs work under its own HSSE MS, which is materially equivalent to Shell's HSSE MS; Mode 3: contractor/supplier performs work under its own HSSE MS. Also in line with industry standards, we report on safety performance only for contract modes 1 and 2.

[B] Includes fatal occupational injuries and illnesses except for those related to COVID-19. There were 2 COVID-19-related occupational illnesses in 2020 that resulted in death (0 employees, 2 contractors) and one COVID-19-related fatality in 2021 (0 employees, 1 contractor).

[C] Defined as a serious work-related injury or illness, including those that resulted in Fatality or a Life Altering Event. Life Altering Event is defined as a long-term or permanent injury/ illness with significant impact to daily activities. Examples of SIF include, but are not limited to, permanent total disability, amputation of a body part (full or partial), reduced bodily mobility (full or partial), 3rd degree burns, impaired vision, hearing, sense of taste or smell.

[D] Data prior to 2019 are not available. The number of SIF cases for 2019 and 2020 reflects the best estimate. Combined workforce SIF frequency for 2019-2020 was adjusted to account for some uncertainty in the number of SIF cases.

Road Transport Safety [A]

	Unit	2021	2020	2019	2018	2017	IPIECA	SASB	GRI
Road transport safety performance							SHS-4	-	-
Severe motor vehicle incident frequency rate [B]	Number of severe motor vehicle incidents per 100 million kilometres driven	**1.7**	2.1	3.5	3.1	2.5	SHS-4	-	-
Number of road-transport-related fatalities (employees and contractors)	Number	**0**	0	2	0	1	SHS-4	-	-

[A] In line with industry standards, we distinguish three contract modes. Mode 1: contractor/supplier performs work under Shell's HSSE Management System (HSSE MS); Mode 2: contractor/supplier performs work under its own HSSE MS, which is materially equivalent to Shell's HSSE MS; Mode 3: contractor/supplier performs work under its own HSSE MS. Also in line with industry standards, we report on safety performance only for contract modes 1 and 2.

[B] Severe motor vehicle incident is defined as a motor vehicle incident resulting in a fatality, serious injury or a rollover of a vehicle.

Process Safety

	Unit	2021	2020	2019	2018	2017	IPIECA	SASB	GRI
Operational process safety events [A] [B]	Number	**102**	103	130	121	166	SHS-6	EM-EP-540a.1	-
Tier 1	Number	**38**	34	41	35	49	SHS-6	EM-EP-540a.1	-
Upstream	Number	**7**	10	7	6	14	SHS-6	EM-EP-540a.1	-
Integrated Gas, Renewables and Energy Solutions	Number	**2**	3	1	0	2	SHS-6	EM-EP-540a.1	-
Downstream	Number	**29**	20	32	28	33	SHS-6	EM-EP-540a.1	-
Other	Number	**0**	1	1	1	0	SHS-6	EM-EP-540a.1	-
Tier 2	Number	**64**	69	89	86	117	SHS-6	EM-EP-540a.1	-
Upstream	Number	**13**	14	22	23	32	SHS-6	EM-EP-540a.1	-
Integrated Gas, Renewables and Energy Solutions	Number	**4**	3	7	6	5	SHS-6	EM-EP-540a.1	-
Downstream	Number	**45**	49	59	54	70	SHS-6	EM-EP-540a.1	-
Other	Number	**2**	3	1	3	10	SHS-6	EM-EP-540a.1	-

[A] Process safety events classified according to guidance from the IOGP and API.

[B] In 2021, there were seven Tier 1 sabotage-related events (not included in above data). The classification of sabotage-related process safety events is made on the best-endeavours basis.

Health

	Unit	2021	2020	2019	2018	2017	IPIECA	SASB	GRI
Total recordable occupational illness frequency (TROIF) (employees only) [A]	Number per million hours	**0.4**	0.2	0.5	0.4	0.3	SHS-3	EM-EP-320a.1	403-10

[A] Does not include COVID-19-related occupational illnesses. There were 86 COVID-19-related employee occupational illnesses in 2021.

Security [A]

	Unit	2021	2020	2019	2018	2017	IPIECA	SASB	GRI
Using armed security	% of countries	**14**	14	20	21	14	SHS-7	-	-
Using armed company security	% of countries	**3**	1	1	3	1	SHS-7	-	-
Using armed contractor security	% of countries	**8**	8	11	10	3	SHS-7	-	-

[A] Data obtained from an internal survey completed by the senior Shell representative in each country.

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GREENHOUSE GAS AND ENERGY DATA

Net carbon intensity (NCI)

	Unit	2021	2020	2019	2018	2017	IPIECA	SASB	GRI
NET CARBON INTENSITY [A] [D]									
Net carbon intensity	gCO_2e/MJ	**77**	75	78	79	79	-	-	-
Estimated total energy delivered by Shell	trillion (10^12) MJ	**17.89**	18.40	21.05	22.00	21.44	-	-	-
Share of energy delivered per energy product type [B] [E]									
Oil products and GTL	%	**45**	47	56	55	54	-	-	-
Gas	%	**25**	21	17	21	23	-	-	-
LNG	%	**18**	19	18	16	15	-	-	-
Biofuels	%	**1**	1	1	1	1	-	-	-
Power	%	**12**	12	9	7	7	-	-	-
Total estimated greenhouse gas emissions covered by the net carbon intensity calculation [C]	million tonnes CO_2e	**1,375**	1,384	1,646	1,731	1,688	-	-	-
Carbon intensity of energy products type [F] [G]									
Oil products and GTL	gCO_2e/MJ	**91**	89	89	88	89	-	-	-
Gas	gCO_2e/MJ	**66**	67	66	67	67	-	-	-
LNG	gCO_2e/MJ	**70**	70	71	71	71	-	-	-
Biofuels	gCO_2e/MJ	**41**	38	39	37	39	-	-	-
Power	gCO_2e/MJ	**66**	48	57	62	60	-	-	-

[A] The NCI calculation uses Shell's energy product sales volume data, as disclosed in the Annual Report and Sustainability Report. This excludes certain contracts held for trading purposes and reported net rather than gross. Business-specific methodologies to net volumes have been applied in oil products and pipeline gas and power. Paper trades that do not result in physical product delivery are excluded. Retail sales volumes from markets where Shell operates under trademark licensing agreements are also excluded from the scope of Shell's carbon intensity metric.

[B] Percentage of delivered energy may not add up to 100% because of rounding.

[C] Total CO_2e emissions estimated using Shell's Net Carbon Footprint value and the estimate of total delivered energy. Note that this estimated value is calculated from the portfolio average intensity value, which is determined in Shell's Net Carbon Footprint calculation. It is only intended to give an indication of the scope of the emissions included within Shell's Net Carbon Footprint; it does not represent an inventory of emissions. Carbon offsets for 2019, 2020 and 2021 were included in the total estimated GHG emissions covered by the Net Carbon Footprint calculation.

[D] Acquisitions and divestments are included in the actual performance tracking with the target and reference year unchanged. Note that acquisition and divestments could have a material impact on meeting the targets.

[E] Lower heating values are used for the energy content of the different products and a fossil-equivalence approach is used to account for electrical energy, so that it is assessed on the same basis as our other energy products.

[F] In 2021, emissions included in carbon intensity of power have been calculated using the market-based method.

[G] The carbon intensity of biofuels reflects the global average for biofuels sold by Shell for 2021.

Sales of gas and power produced by third parties

	Unit	2021	2020	2019 [A]	2018	2017	IPIECA	SASB	GRI
Gas	tBtu	**3,630**	3,009	2,720	3,246	3,276	-	-	-
Power	TWh	**247**	252	207	179	165	-	-	-

In certain cases, prior to 2019, it was not possible to disaggregate sales of Shell and third-party gas volumes. To avoid double-counting these sales volumes were not included in the above figures.

[A] From 2019, gas and power sales volumes are reported based on a revised methodology. Sales volumes reported exclude those related to pure trading activities.

Scope 1 GHG emissions (operational control) [A] [B] [C] [D]

	Unit	2021	2020	2019	2018	2017	IPIECA	SASB	GRI
Direct GHG emissions (Scope 1)	million tonnes CO_2e	**60**	63	70	71	73	CCE-4	EM-EP-110a.1	305-1
Carbon dioxide (CO_2)	million tonnes	**58**	61	67	69	70	CCE-4	EM-EP-110a.1	305-1
Methane (CH_4)	thousand tonnes	**55**	67	91	92	123	CCE-4	EM-EP-110a.1	305-1
Nitrous oxide (N_2O)	thousand tonnes	**1**	1	1	1	1	CCE-4	EM-EP-110a.1	305-1
Hydrofluorocarbons (HFCs)	tonnes	**25**	30	29	31	22	CCE-4	EM-EP-110a.1	305-1
Sulphur hexafluoride (SF_6)	tonnes	**0.01**	0.01	0.01	0.03	0.01	CCE-4	EM-EP-110a.1	305-1
Perfluorocarbons (PFC)	tonnes	**0**	0	0	0	0	CCE-4	EM-EP-110a.1	305-1
Nitrogen trifluoride (NF_3)	tonnes	**0**	0	0	0	0	CCE-4	EM-EP-110a.1	305-1
Scope 1 emissions by business									
Upstream	million tonnes CO_2e	**11.7**	12.8	12.9	14.8	19.6	CCE-4	EM-EP-110a.1	305-1
Integrated Gas	million tonnes CO_2e	**15.5**	14.1	16.3	13.0	12.0	CCE-4	EM-EP-110a.1	305-1
Downstream	million tonnes CO_2e	**32.6**	35.8	40.2	42.7	41.1	CCE-4	EM-EP-110a.1	305-1
Refining [E]	million tonnes CO_2e	**20.1**	23.4	28.0	29.1	27.8	CCE-4	EM-EP-110a.1	305-1
Chemicals	million tonnes CO_2e	**11.0**	10.8	10.5	11.6	11.4	CCE-4	EM-EP-110a.1	305-1
Other Downstream [F]	million tonnes CO_2e	**1.4**	1.6	1.8	2.1	2.0	CCE-4	EM-EP-110a.1	305-1
Other [G]	million tonnes CO_2e	**0.2**	0.2	0.2	0.8	0.2	CCE-4	EM-EP-110a.1	305-1
Scope 1 emissions by country									
USA	million tonnes CO_2e	**13**	16	19	20	18	CCE-4	EM-EP-110a.1	305-1
Middle East	million tonnes CO_2e	**9**	9	9	10	11	CCE-4	EM-EP-110a.1	305-1
Netherlands	million tonnes CO_2e	**7**	7	7	7	7	CCE-4	EM-EP-110a.1	305-1
Singapore	million tonnes CO_2e	**5**	6	6	7	7	CCE-4	EM-EP-110a.1	305-1
Australia	million tonnes CO_2e	**5**	4	7	4	3	CCE-4	EM-EP-110a.1	305-1
Canada	million tonnes CO_2e	**5**	5	6	6	6	CCE-4	EM-EP-110a.1	305-1
Nigeria	million tonnes CO_2e	**5**	5	4	4	5	CCE-4	EM-EP-110a.1	305-1
Germany	million tonnes CO_2e	**3**	3	3	4	4	CCE-4	EM-EP-110a.1	305-1
Malaysia	million tonnes CO_2e	**2**	3	2	3	3	CCE-4	EM-EP-110a.1	305-1
United Kingdom	million tonnes CO_2e	**2**	2	2	2	3	CCE-4	EM-EP-110a.1	305-1
International waters	million tonnes CO_2e	**1**	1	2	2	1	CCE-4	EM-EP-110a.1	305-1
Rest of the world	million tonnes CO_2e	**2**	3	3	4	5	CCE-4	EM-EP-110a.1	305-1

	Unit	2021	2020	2019	2018	2017	IPIECA	SASB	GRI
Scope 1 emissions by source									
CO_2 emissions	million tonnes	**58**	61	67	69	70	CCE-4	EM-EP-110a.2	305-1
Combustion	million tonnes	**47**	50	53	54	53	CCE-4	EM-EP-110a.2	305-1
Flaring	million tonnes	**5**	4	7	6	9	CCE-4	EM-EP-110a.2	305-1
Venting and process	million tonnes	**6**	6	8	9	8	CCE-4	EM-EP-110a.2	305-1
Fugitives	million tonnes	**0**	0	0	0	0	CCE-4	EM-EP-110a.2	305-1
CH_4 emissions	thousand tonnes	**55**	67	91	92	123	CCE-4	EM-EP-110a.2	305-1
Combustion	thousand tonnes	**7**	11	13	13	12	CCE-4	EM-EP-110a.2	305-1
Flaring	thousand tonnes	**19**	15	19	18	27	CCE-4	EM-EP-110a.2	305-1
Venting and process	thousand tonnes	**22**	29	44	45	62	CCE-4	EM-EP-110a.2	305-1
Fugitives	thousand tonnes	**7**	12	15	16	23	CCE-4	EM-EP-110a.2	305-1
Other greenhouse gases	million tonnes CO_2e	**0.2**	0.3	0.3	0.3	0.3	CCE-4	EM-EP-110a.2	305-1
Methane (CH_4) emissions									
Methane emissions in CO_2 equivalent [H]	million tonnes CO_2e	**1.4**	1.7	2.3	2.3	3.1	CCE-4	EM-EP-110a.1	305-1
Methane emissions intensity - assets with marketed gas	%	**0.06**	0.06	0.08	0.08	–	CCE-4	EM-EP-110a.1	305-1
Methane emissions intensity - assets without marketed gas	%	**0.01**	0.01	0.01	0.01	–	CCE-4	EM-EP-110a.1	305-1
Upstream flaring [I]									
GHG emissions from flaring	million tonnes CO_2e	**4.5**	3.8	5.9	5.2	8.2	CCE-4	EM-EP-110a.2	305-1
Total hydrocarbons flared	million tonnes	**1.3**	1.1	1.8	1.5	2.5	CCE-4	EM-EP-110a.2	305-1
Nigeria	million tonnes	**0.8**	0.6	0.7	0.6	0.8	CCE-4	EM-EP-110a.2	305-1
Rest of the world	million tonnes	**0.4**	0.5	1.2	1.0	1.7	CCE-4	EM-EP-110a.2	305-1
Total hydrocarbons flared - routine	million tonnes	**0.2**	0.3	0.5	0.6	1.2	-	-	-
Total hydrocarbons flared - non-routine	million tonnes	**1.0**	0.8	1.4	0.9	1.3	-	-	-
Upstream Flaring Intensity [J]	%	**0.8**	0.6	0.9	0.8	1.1	-	-	-
GHG emissions from exported energy [K]	million tonnes CO_2e	**3**	3	3	3	3	CCE-4	EM-EP-110a.2	305-1

[A] Greenhouse gas emissions (GHG) comprise carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, sulphur hexafluoride and nitrogen trifluoride. The data are calculated using locally regulated methods where they exist. Where there is no locally regulated method, the data are calculated using the 2009 API Compendium, which is the recognised industry standard under the GHG Protocol Corporate Accounting and Reporting Standard. There are inherent limitations to the accuracy of such data. Oil and gas industry guidelines (IPIECA/API/IOGP) indicate that several sources of uncertainty can contribute to the overall uncertainty of a corporate emissions inventory. We have estimated the overall uncertainty for our direct GHG emissions to be around 4% for 2021.

[B] GHG emissions were calculated using global warming potential (GWP) factors from the IPCC's Fourth Assessment Report. For comparison, our Scope 1 emissions would have been 60 million tonnes in 2021 if we were to use GWPs from the IPCC's Fifth Assessment Report.

[C] We have updated some of our historical figures following a review of the data.

[D] GHG emissions in this table do not include carbon credits.

[E] Includes Scotford Upgrader and Quest Carbon Capture and Storage.

[F] Includes emissions from other Downstream assets and activities (e.g. shipping, lubricants, trading & supply). Includes oil sands mining until its divestment on May 31, 2017.

[G] Includes emissions from assets and activities reported by Projects & Technology business and Global Functions.

[H] Methane emissions were converted to CO_2 equivalents using GWP from the IPCC's Fourth Assessment Report. For comparison, our methane emissions would have been 1.5 million tonnes in CO_2 equivalents in 2021 if we were to use GWPs from the IPCC's Fifth Assessment Report.

[I] Includes Upstream and Integrated Gas businesses.

[J] Calculated as total hydrocarbons flared divided by sum of total oil and gas wellhead production, LNG and GTL production x 100%.

[K] GHG emissions related to energy production (in the form of electricity, heat or steam) that was exported to another facility or public grid. This is a subset of our Scope 1 GHG emissions.

Scope 2 GHG emissions (operational control) [A] [B] [C]

	Unit	2021	2020	2019	2018	2017	IPIECA	SASB	GRI
Scope 2 emissions - market-based method	million tonnes CO_2e	**8**	8	10	11	12	CCE-4	-	305-2
Scope 2 emissions - location-based method	million tonnes CO_2e	**9**	10	11	11	11	CCE-4	-	305-2
Scope 2 emissions by business (market-based method)									
Upstream	million tonnes CO_2e	**0.6**	0.6	1.1	1.4	1.4	CCE-4	-	305-2
Integrated Gas	million tonnes CO_2e	**1.4**	1.5	1.6	2.4	2.4	CCE-4	-	305-2
Downstream	million tonnes CO_2e	**5.6**	6.0	6.9	6.8	7.5	CCE-4	-	305-2
Other	million tonnes CO_2e	**0.1**	0.1	0.2	0.2	0.2	CCE-4	-	305-2
Scope 2 emissions by country (market-based method)									
USA	million tonnes CO_2e	**2.6**	3.0	3.1	3.2	3.1	CCE-4	-	305-2
Netherlands	million tonnes CO_2e	**1.5**	1.4	1.7	1.8	1.9	CCE-4	-	305-2
Australia	million tonnes CO_2e	**1.3**	1.4	1.6	2.4	2.3	CCE-4	-	305-2
Canada	million tonnes CO_2e	**1.2**	1.3	2.3	2.0	2.7	CCE-4	-	305-2
Singapore	million tonnes CO_2e	**0.5**	0.5	0.5	0.5	0.6	CCE-4	-	305-2
Germany	million tonnes CO_2e	**0.2**	0.3	0.3	0.4	0.7	CCE-4	-	305-2
Rest of the world	million tonnes CO_2e	**0.2**	0.2	0.3	0.4	0.3	CCE-4	-	305-2
Scope 2 emissions by business (location-based method)									
Upstream	million tonnes CO_2e	**0.6**	0.6	1.1	1.2	1.4	CCE-4	-	305-2
Integrated Gas	million tonnes CO_2e	**2.6**	2.7	2.7	2.4	2.3	CCE-4	-	305-2
Downstream	million tonnes CO_2e	**5.5**	6.1	7.1	6.8	7.4	CCE-4	-	305-2
Other	million tonnes CO_2e	**0.1**	0.2	0.2	0.2	0.2	CCE-4	-	305-2
Scope 2 emissions by country (location-based method)									
USA	million tonnes CO_2e	**2.6**	3.1	3.2	3.4	3.1	CCE-4	-	305-2
Australia	million tonnes CO_2e	**2.5**	2.6	2.6	2.4	2.3	CCE-4	-	305-2
Netherlands	million tonnes CO_2e	**1.4**	1.3	1.6	1.7	1.9	CCE-4	-	305-2
Canada	million tonnes CO_2e	**1.2**	1.4	2.3	2.0	2.7	CCE-4	-	305-2
Singapore	million tonnes CO_2e	**0.5**	0.5	0.5	0.5	0.6	CCE-4	-	305-2
Germany	million tonnes CO_2e	**0.2**	0.3	0.4	0.3	0.4	CCE-4	-	305-2
Rest of the world	million tonnes CO_2e	**0.3**	0.4	0.4	0.4	0.3	CCE-4	-	305-2

[A] Split by business or country may not add up to total due to rounding.
[B] We have updated some of our historical figures following a review of the data.
[C] We estimated the uncertainty of our 2021 Scope 2 GHG emissions to be around 6% (both market- and location-based methods).

GHG intensities (operational control)

	Unit	2021	2020	2019	2018	2017	IPIECA	SASB	GRI
Upstream and Integrated Gas GHG intensity [A]	tonne CO_2e/tonne production	**0.172**	0.159	0.168	0.158	0.166	CCE-4	-	305-4
Upstream and Integrated Gas GHG intensity [B]	kg CO_2e/boe	**22**	21	22	21	22	CCE-4	-	305-4
Refinery GHG intensity [C]	tonne CO_2e/ UEDC™	**1.05**	1.05	1.06	1.05	1.14	CCE-4	-	305-4
Chemical GHG intensity [D]	tonne CO_2e/tonne production	**0.95**	0.98	1.04	0.96	0.95	CCE-4	-	305-4

[A] In tonnes of Scope 1 and Scope 2 GHG emissions per tonne of oil and gas available for sale, liquefied natural gas and gas-to-liquids production in Integrated Gas and Upstream. 2021 figure does not include Prelude Floating Liquified Natural Gas (FLNG).

[B] In kilograms of Scope 1 and Scope 2 GHG emissions per boe of oil and gas available for sale, liquefied natural gas and gas-to-liquids production in Integrated Gas and Upstream. 2021 figure does not include Prelude Floating Liquified Natural Gas (FLNG).

[C] UEDC™ (Utilised Equivalent Distillation Capacity) is a proprietary metric of Solomon Associates. It is a complexity-weighted normalisation parameter that reflects the operating cost intensity of a refinery based on size and configuration of its particular mix of process and non-process facilities.

[D] High-value chemicals include olefin products (ethylene and propylene) plus the contained butadiene, benzene, acetylene, and high-purity hydrogen production.

Scope 1 and 2 GHG emissions (equity boundary) [A]

	Unit	2021	2020	2019	2018	2017	IPIECA	SASB	GRI
Direct GHG emissions (Scope 1)	million tonnes CO_2e	**91**	**98**	**105**	**102**	**97**	CCE-4	EM-EP-110a.1	305-1
Upstream	million tonnes CO_2e	**18.5**	20.1	21.7	22.2	25.4	CCE-4	EM-EP-110a.1	305-1
Integrated Gas	million tonnes CO_2e	**24.5**	24.2	25.9	25.2	24.1	CCE-4	EM-EP-110a.1	305-1
Downstream	million tonnes CO_2e	**47.6**	53.2	57.3	53.8	47.1	CCE-4	EM-EP-110a.1	305-1
Other	million tonnes CO_2e	**0.2**	0.2	0.2	0.8	0.3	CCE-4	EM-EP-110a.1	305-1
Scope 2 emissions (market-based method)	million tonnes CO_2e	**9**	**9**	**11**	**11**	**13**	CCE-4	-	305-2
Upstream	million tonnes CO_2e	**0.7**	0.7	1.2	1.3	1.3	CCE-4	-	305-2
Integrated Gas	million tonnes CO_2e	**1.1**	1.0	1.1	1.8	2.0	CCE-4	-	305-2
Downstream	million tonnes CO_2e	**6.7**	7.1	8.0	7.7	9.2	CCE-4	-	305-2
Other	million tonnes CO_2e	**0.1**	0.1	0.2	0.2	0.2	CCE-4	-	305-2
Scope 2 emissions (location-based method)	million tonnes CO_2e	**10**	**10**	**12**	**11**	**13**	-	-	-
Upstream	million tonnes CO_2e	**0.7**	0.8	1.2	1.2	1.3	CCE-4	-	305-2
Integrated Gas	million tonnes CO_2e	**1.8**	1.7	1.8	1.8	2.0	CCE-4	-	305-2
Downstream	million tonnes CO_2e	**7.0**	7.5	8.3	7.6	9.5	CCE-4	-	305-2
Other	million tonnes CO_2e	**0.1**	0.2	0.2	0.3	0.2	CCE-4	-	305-2

[A] Split by business may not add up to total due to rounding.

Scope 3 GHG emissions [A] [B]

	Unit	2021	2020	2019	2018	2017	IPIECA	SASB	GRI
Purchased goods and services (Category 1)									
Third-party products [C]	million tonnes CO_2e	**147**	147	178	190	186	CCE-4	-	305-3
Fuel and energy-related activities (not included in Scope 1 or Scope 2) (Category 3)									
Third-party power [D]	million tonnes CO_2e	**136**	103	102	96	87	CCE-4	-	305-3
Downstream Transportation and Distribution (Category 9)									
Sold own energy products [E]	million tonnes CO_2e	**6**	–	–	–	–	–	–	305-3
Use of sold products (Category 11)									
Use of sold products [F]	million tonnes CO_2e	**1,010**	1,054	1,271	1,351	1,318	CCE-4	-	305-3
Own production [G]	million tonnes CO_2e	**380**	452	564	594	582	CCE-4	-	305-3
Third-party products [H]	million tonnes CO_2e	**630**	602	708	757	736	CCE-4	-	305-3

[A] The values in this table reflect estimated Scope 3 emissions included in our net carbon intensity. This excludes certain contracts held for trading purposes and reported net rather than gross. Business-specific methodologies to net volumes have been applied in oil products and pipeline gas and power. Paper trades that do not result in physical product delivery are excluded. Retail sales volumes from markets where Shell operates under trademark licensing agreements are also excluded from the scope of Shell's carbon intensity metric.
[B] Estimated emissions from other Scope 3 categories are published on www.shell.com/ghg. 2021 data will be available in June 2022.
[C] This category includes estimated well-to-tank emissions from purchased third-party refined oil products, natural gas, LNG, crude oil and biofuels.
[D] This category includes estimated well-to-wire emissions from generation of purchased power included in our net carbon intensity.
[E] Estimated emissions from transportation and distribution of sold own oil products, LNG, GTL, natural gas, and biofuels.
[F] This category includes estimated emissions from sales volumes of oil products, natural gas, LNG, GTL and biofuels.
[G] This category includes estimated emissions from our refinery production, natural gas, LNG and GTL products.
[H] Estimated as the difference between own production and total sold products.

Other greenhouse gas data (operational control)

	Unit	2021	2020	2019	2018	2017	IPIECA	SASB	GRI
Carbon capture and storage and CO_2 transfer out									
CO_2 captured and stored	million tonnes	**1.05**	0.94	1.13	1.07	1.14	CCE-3	EM-EP-530a.1	305-5
CO_2 transferred out [A]	million tonnes	**0.33**	0.30	0.43	0.46	0.45	CCE-3	EM-EP-530a.1	305-5
Biogenic CO_2									
Biogenic CO_2 [B]	thousand tonnes	**3.60**	0.27	0.00	0.00	9.70	-	-	-

[A] CO_2 captured and transferred to another organisation (for example, sold or given for free) as product or feedstock. It is not included in our Scope 1 emissions.
[B] Direct biogenic CO_2. It is not included in our Scope 1 emissions.

Carbon credits

	Unit	2021	2020	2019	2018	2017	IPIECA	SASB	GRI
Total carbon credits retired									
Included in net carbon intensity	million tonnes	**5.1**	3.9	2.2	0.0	0.0	-	EM-EP-530a.1	305-5
Other carbon credits	million tonnes	**1.3**	0.4	0.5	n/c	n/c	-	EM-EP-530a.1	305-5

n/c = not collected

Energy use (operational control) [A]

	Unit	2021	2020	2019	2018	2017	IPIECA	SASB	GRI
Total energy use	million MWh	**223**	**241**	**264**	**268**	**269**	CCE-6	-	302-1
Own energy generated	million MWh	**202**	219	236	240	241	CCE-6	-	302-1
Imported electricity	million MWh	**20**	22	27	26	26	CCE-6	-	302-1
Imported steam and heat	million MWh	**14**	14	17	15	17	CCE-6	-	302-1
Exported electricity	million MWh	**11**	12	10	10	10	CCE-6	-	302-1
Exported steam and heat	million MWh	**2**	2	6	3	5	CCE-6	-	302-1
Consumption of energy from renewable sources									
Renewable sources - onsite energy generation consumed	million MWh	**0.004**	0.005	n/c	n/c	n/c	CCE-6	-	302-1
Renewable sources - purchased electricity	million MWh	**2.1**	1.8	1.5	0.03	0.03	CCE-6	-	302-1
Renewable sources - purchased steam	million MWh	**0.00**	0.00	n/c	n/c	n/c	CCE-6	-	302-1
Renewable sources - electricity exported to grid	million MWh	**0.5**	0.4	0.4	n/c	n/c	CCE-6	-	302-1
Energy intensity									
Upstream excl. oil sands, LNG and GTL	GJ/tonne production	**1.14**	1.15	1.07	1.06	1.05	CCE-6	-	302-1
Refineries: Refinery Energy Index [B]	Index	**96.9**	96.1	94.2	94.3	94.8	CCE-6	-	302-1
Chemical plants: chemicals energy intensity	GJ/tonne production	**18.1**	18.7	19.4	18.3	17.6	CCE-6	-	302-1

n/c = not collected
[A] We have updated some of our historical figures following a review of the data.
[B] Data are indexed to 2002, based on Solomon Associates Energy Intensity Index methodology.

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OTHER ENVIRONMENTAL DATA

Air emissions [A]

	Unit	2021	2020	2019	2018	2017	IPIECA	SASB	GRI
Acid gases and VOCs									
Sulphur oxides (SOx)	Thousand tonnes	**32**	36	65	74	81	ENV-5	EM-EP-120a.1	305-7
Upstream	Thousand tonnes	**4**	4	15	19	24	ENV-5	EM-EP-120a.1	305-7
Integrated Gas	Thousand tonnes	**2**	3	4	4	2	ENV-5	EM-EP-120a.1	305-7
Downstream	Thousand tonnes	**26**	29	47	51	55	ENV-5	EM-EP-120a.1	305-7
Other	Thousand tonnes	**0**	0	0	0	0	ENV-5	EM-EP-120a.1	305-7
Nitrogen oxides (NOx)	Thousand tonnes	**105**	118	108	111	107	ENV-5	EM-EP-120a.1	305-7
Upstream	Thousand tonnes	**55**	60	40	41	44	ENV-5	EM-EP-120a.1	305-7
Integrated Gas	Thousand tonnes	**14**	12	13	10	9	ENV-5	EM-EP-120a.1	305-7
Downstream	Thousand tonnes	**36**	46	55	58	53	ENV-5	EM-EP-120a.1	305-7
Other	Thousand tonnes	**1**	0	1	2	0	ENV-5	EM-EP-120a.1	305-7
Volatile organic compounds (VOCs)	Thousand tonnes	**45**	47	55	59	95	ENV-5	EM-EP-120a.1	305-7
Upstream	Thousand tonnes	**17**	17	17	25	42	ENV-5	EM-EP-120a.1	305-7
Integrated Gas	Thousand tonnes	**8**	8	15	6	7	ENV-5	EM-EP-120a.1	305-7
Downstream	Thousand tonnes	**21**	22	23	29	46	ENV-5	EM-EP-120a.1	305-7
Other	Thousand tonnes	**0**	0	0	0	0	ENV-5	EM-EP-120a.1	305-7
Ozone-depleting emissions									
CFCs/halons/trichloroethane	Tonnes	**0.0**	0.0	0.0	0.0	0.0	ENV-5	-	305-6
Hydrochlorofluorocarbons (HCFCs)	Tonnes	**2**	6	8	9	7	ENV-5	-	305-6

[A] Split by business may not add up to total due to rounding.

Spills of more than 100 kg to environment

	Unit	2021	2020	2019	2018	2017	IPIECA	SASB	GRI
Spills [A]									
Sabotage spills – number [B] [C]	Number	**106**	122	156	109	62	ENV-6	EM-EP-160a.2	306-3
Sabotage spills – total volume [B]	Thousand tonnes	**3.3**	1.5	2.3	1.8	1.4	ENV-6	EM-EP-160a.2	306-3
Sabotage spills - recovered volume	Thousand tonnes	**3.0**	1.0	n/c	n/c	n/c	ENV-6	EM-EP-160a.2	306-3
Operational spills – number [G]	Number	**41**	70	68	93	102	ENV-6	EM-EP-160a.2	306-3
Nigeria [D] [E] [G]	Number	**9**	12	8	15	10	ENV-6	EM-EP-160a.2	306-3
Rest of the world	Number	**32**	58	60	78	92	ENV-6	EM-EP-160a.2	306-3
Operational spills - total volume	Thousand tonnes	**0.05**	0.4	0.2	0.9	0.4	ENV-6	EM-EP-160a.2	306-3
Nigeria [D]	Thousand tonnes	**0.03**	0.03	0.03	0.4	0.1	ENV-6	EM-EP-160a.2	306-3
Rest of the world	Thousand tonnes	**0.02**	0.4	0.2	0.5	0.3	ENV-6	EM-EP-160a.2	306-3
Operational spills - recovered volume	Thousand tonnes	**0.03**	0.1	n/c	n/c	n/c	ENV-6	EM-EP-160a.2	306-3
Nigeria [D]	Thousand tonnes	**0.02**	0.01	n/c	n/c	n/c	ENV-6	EM-EP-160a.2	306-3
Rest of the world	Thousand tonnes	**0.01**	0.1	n/c	n/c	n/c	ENV-6	EM-EP-160a.2	306-3
Hurricane spills – number [F]	Number	**2**	0	0	0	4	ENV-6	EM-EP-160a.2	306-3
Hurricane spills – total volume [F]	Thousand tonnes	**0.03**	0	0	0	0.3	ENV-6	EM-EP-160a.2	306-3
Hurricane spills - recovered volume	Thousand tonnes	**0.01**	0	n/c	n/c	n/c	ENV-6	EM-EP-160a.2	306-3

n/c - not collected

[A] All spill volumes and numbers are for hydrocarbon spills of more than 100 kilograms to environment (land or water). We have updated some of our historical figures following a review of the data.

[B] All sabotage- and theft-related spills in 2017-2021 have occurred in Nigeria.

[C] We have restated the number of sabotage spills from 107 (as reported in the Annual Report) to 106 in 2021 following a review of data to exclude a spill from OML 17, as the spill occurred after the divestment.

[D] Nigeria includes SPDC onshore operations and SNEPCo offshore operations.

[E] Nigeria includes SPDC onshore operations (nine operational spills in 2021) and SNEPCo offshore operations (zero operational spills in 2021).

[F] This category reflects the spills caused by exceptional natural events, such as hurricanes and earthquakes. 2017 data reflects the impact of Hurricane Harvey. 2021 data reflects the impact of Hurricane Ida.

[G] We have updated the number of operational spills from 10 to 9 (as reported in the Annual Report) in 2021 following a review of data which indicates that a spill previously thought to be operational, was instead residual impact from a previous incident.

Water use and discharge

	Unit	2021	2020	2019	2018	2017	IPIECA	SASB	GRI
Water use and discharge [A]									
Fresh water withdrawn	Million cubic metres	**166**	171	192	199	204	ENV-1	EM-EP-140a.1	303-3
Fresh water consumed	Million cubic metres	**122**	127	145	147	154	ENV-1	EM-EP-140a.1	303-5
Fresh water consumed in high water stress areas [B]	Million cubic metres	**22**	22	25	25				
Fresh water returned [C]	Million cubic metres	**44**	45	46	53	51	ENV-1	EM-EP-140a.1	303-3
Fresh water withdrawn by business									
Upstream	Million cubic metres	**9**	6	8	11	11	ENV-1	EM-EP-140a.1	303-3
Integrated Gas	Million cubic metres	**4**	3	4	4	6	ENV-1	EM-EP-140a.1	303-3
Downstream	Million cubic metres	**151**	159	177	182	185	ENV-1	EM-EP-140a.1	303-3
Other	Million cubic metres	**2**	3	3	3	2	ENV-1	EM-EP-140a.1	303-3
Fresh water withdrawn by country									
USA	Million cubic metres	**84**	92	108	109	98	ENV-1	EM-EP-140a.1	303-3
Canada	Million cubic metres	**21**	21	23	24	37	ENV-1	EM-EP-140a.1	303-3
Singapore	Million cubic metres	**20**	19	22	22	23	ENV-1	EM-EP-140a.1	303-3
Netherlands	Million cubic metres	**16**	16	17	16	16	ENV-1	EM-EP-140a.1	303-3
Germany	Million cubic metres	**13**	13	12	14	14	ENV-1	EM-EP-140a.1	303-3
Rest of the world	Million cubic metres	**12**	10	11	15	16	ENV-1	EM-EP-140a.1	303-3
Fresh water withdrawn by source									
Surface	Million cubic metres	**91**	94	98	102	100	ENV-1	EM-EP-140a.1	303-3
Ground	Million cubic metres	**18**	18	18	21	24	ENV-1	EM-EP-140a.1	303-3
Public utilities [D]	Million cubic metres	**57**	60	76	77	79	ENV-1	EM-EP-140a.1	303-3
Other [E]	Million cubic metres	**0**	0	0	0	2	ENV-1	EM-EP-140a.1	303-3
Produced water disposed	Million cubic metres	**81**	**88**	**92**	**96**	**100**	ENV-1	EM-EP-140a.2	**–**
Produced water reinjected	Million cubic metres	**17**	21	21	22	26	ENV-1	EM-EP-140a.2	–
Produced water discharged	Million cubic metres	**47**	51	51	49	54	ENV-1	EM-EP-140a.2	–
Produced water exported for disposal or reuse	Million cubic metres	**16**	16	19	25	20	ENV-1	EM-EP-140a.2	–
Oil in effluents to surface environment	Thousand tonnes	**1.0**	**1.4**	**1.3**	**1.4**	**1.2**	ENV-2	EM-EP-140a.2	**–**
Oil in produced water	Thousand tonnes	**0.7**	0.9	0.9	0.9	0.9	ENV-2	EM-EP-140a.2	–

[A] Fresh water figures do not include once-through cooling water. Breakdown may not add up to total due to rounding.
[B] At the end of 2021, four of our major facilities were located in areas where there is a high level of water stress based on analysis using water stress tools, including the World Resources Institute's Aqueduct Water Risk Atlas and a local assessment. The facilities are: Pearl gas-to-liquids (GTL) plant in Qatar, Shell Energy and Chemicals Park and the Jurong Island chemical plant in Singapore and the Tabangao import terminal in the Philippines.
[C] Defined as fresh water returned back to a freshwater source.
[D] Includes imported steam.
[E] Includes harvested rainwater and surface run-off collected for usage.

Waste management [A] [B]

	Unit	2021	2020	2019	2018	2017	IPIECA	SASB	GRI
Waste									
Total waste disposed	Thousand tonnes	**1,993**	2,049	2,113	1,999	2,020	ENV-7	-	306-3
Hazardous waste disposed	Thousand tonnes	**1,025**	558	698	592	638	ENV-7	-	306-3
Upstream	Thousand tonnes	**345**	122	90	36	93	ENV-7	-	306-3
Integrated Gas	Thousand tonnes	**9**	26	52	15	29	ENV-7	-	306-3
Downstream	Thousand tonnes	**650**	403	552	537	509	ENV-7	-	306-3
Other	Thousand tonnes	**20**	7	4	4	7	ENV-7	-	306-3
Non-hazardous waste disposed	Thousand tonnes	**969**	1,491	1,414	1,407	1,382	ENV-7	-	306-3
Upstream	Thousand tonnes	**193**	214	252	278	346	ENV-7	-	306-3
Integrated Gas	Thousand tonnes	**96**	18	23	17	31	ENV-7	-	306-3
Downstream	Thousand tonnes	**607**	1,235	1,116	1,095	992	ENV-7	-	306-3
Other	Thousand tonnes	**73**	24	24	17	13	ENV-7	-	306-3
Waste beneficially reused, recycled or recovered [C]	Thousand tonnes	**399**	448	441	419	404	ENV-7	-	306-4
Upstream	Thousand tonnes	**81**	97	58	57	76	ENV-7	-	306-3
Integrated Gas	Thousand tonnes	**36**	15	25	12	15	ENV-7	-	306-3
Downstream	Thousand tonnes	**276**	332	354	328	311	ENV-7	-	306-3
Other	Thousand tonnes	**7**	4	4	3	2	ENV-7	-	306-3

[A] Split by business may not add up to total due to rounding.
[B] We have updated some of our historical figures following a review of the data.
[C] Not included in total waste disposed.

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SOCIAL PERFORMANCE DATA

Social

	2021	2020	2019	2018	2017	IPIECA	SASB	GRI
Our people								
Employees (thousand)	**82**	87	87	82	86	-	-	102-7
Training days for employees and joint-venture partners (thousand)	**271**	234	373	315	425	SOC-7	-	-
Gender diversity [A]								
Employees overall (% women)	**33**	32	31	31	32	SOC-5	-	405-1
Graduate hires (% women)	**48**	49	48	46	49	SOC-5	-	405-1
In supervisory/professional positions (% women)	**34.3**	33.1	30.8	29.9	29.1	SOC-5	-	405-1
In management positions (% women)	**27.2**	25.5	24.5	23.7	22.3	SOC-5	-	405-1
In senior leadership positions (% women)	**29.5**	27.8	26.4	24.0	22.2	SOC-5	-	405-1
Executive Committee (% women)	**25**	12.5	12.5	12.5	12.5	SOC-5	-	405-1
Board of Directors (% women)	**50**	38	42	45	36	SOC-5	-	405-1
i **Staff forums and grievance procedures**								
% countries with staff access to staff forum, grievance procedure or other support system	**100**	100	100	100	100	SOC-12	EM-EP-210a.3.	103-2
i **Child labour (% countries with procedures in place)**								
Own operations	**100**	100	100	100	100	SOC-4	EM-EP-210a.3.	408-1
Contractors and suppliers	**100**	100	100	100	100	SOC-4	EM-EP-210a.3.	408-1
i **Forced labour (% countries with procedures in place)**								
Own operations	**100**	100	100	100	100	SOC-2	EM-EP-210a.3	409-1
Contractors and suppliers	**100**	100	100	100	100	SOC-2	EM-EP-210a.3	409-1
Integrity								
Code of Conduct violations [B]	**181**	216	263	370	261	GOV-1	EM-EP-540a.2	102-17
$ **Contracting and procurement**								
Estimated expenditure on goods and services in lower-income countries ($ billion) [C] [D]	**4.2**	4.5	5.7	4.1	4.9	SOC-14	-	204-1
Social investment [E]								
$ Estimated voluntary social investment (equity share) ($ million)	**94**	156	116	113	111	SOC-13	-	203-1
$ Estimated social investment spend (equity share) in lower-income countries ($ million) [F]	**72**	87	84	102	107	SOC-13	-	203-1

	2021	2020	2019	2018	2017	IPIECA	SASB	GRI
Tax and other payments to governments								
Total taxes paid and collected ($ billion)	**58.7**	47.3	61.3	64.1	59.1	GOV-4	-	-
Corporate income taxes	**6.0**	3.4	7.8	10.1	6.3	GOV-4	-	-
Royalties	**6.6**	3.5	5.9	5.8	3.7	GOV-4	-	-
Excise duties, sales taxes and similar levies	**46.1**	40.4	47.6	48.2	49.1	GOV-4	-	-
Total other payments to governments ($ billion)	**12.8**	8.2	12.5	17.9	14.1	GOV-4	-	-
Production entitlements	**10.5**	7	10.3	14.3	13.6	GOV-4	-	-
Bonuses	**0.15**	0.02	0.3	0.9	0.1	GOV-4	-	-
Fees	**2.1**	1.2	1.9	2.7	0.3	GOV-4	-	-

[A] Diversity data obtained from our human resources system.
[B] Code of Conduct violations represent the number of reported incidents in the Shell Global Helpline (excluding queries or customer service queries) that have been investigated and closed during the relevant period and where the allegation was found to be (at least partially) true.
[C] Estimated expenditure in countries where gross domestic product amounts to less than $15,000 a year per person (source: UNDP Human Development Index 2019).
[D] This figure only includes the amount spent on goods and services by Shell Group companies.
[E] Social investment spending varies from year to year depending on business climate, locations and types of activities under way. This is voluntary social investment and does not include social investments made through contractual agreements with host governments, voluntary work by Shell employees or donations of equipment.
[F] Estimated voluntary social investment spending in countries where gross domestic product amounts to less than $15,000 a year per person (source: UNDP Human Development Index 2019).
$ Social investment and contracting and procurement data collected via our financial system.
i Data obtained from an internal survey completed by the senior Shell representative in each country.

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CAUTIONARY NOTE

The companies in which Shell plc directly and indirectly owns investments are separate legal entities. In this report "Shell", "Shell Group" and "Group" are sometimes used for convenience where references are made to Shell plc and its subsidiaries in general. Likewise, the words "we", "us" and "our" are also used to refer to Shell plc and its subsidiaries in general or to those who work for them. These terms are also used where no useful purpose is served by identifying the particular entity or entities. "Subsidiaries", "Shell subsidiaries" and "Shell companies" as used in this report refer to entities over which Shell plc either directly or indirectly has control. Entities and unincorporated arrangements over which Shell has joint control are generally referred to as "joint ventures" and "joint operations", respectively. "Joint ventures" and "joint operations" are collectively referred to as "joint arrangements". Entities over which Shell has significant influence but neither control nor joint control are referred to as "associates". The term "Shell interest" is used for convenience to indicate the direct and/or indirect ownership interest held by Shell in an entity or unincorporated joint arrangement, after exclusion of all third-party interest.

FORWARD-LOOKING STATEMENTS

This report contains forward-looking statements (within the meaning of the U.S. Private Securities Litigation Reform Act of 1995) concerning the financial condition, results of operations and businesses of Shell. All statements other than statements of historical fact are, or may be deemed to be, forward-looking statements. Forward-looking statements are statements of future expectations that are based on management's current expectations and assumptions and involve known and unknown risks and uncertainties that could cause actual results, performance or events to differ materially from those expressed or implied in these statements. Forward-looking statements include, among other things, statements concerning the potential exposure of Shell to market risks and statements expressing management's expectations, beliefs, estimates, forecasts, projections and assumptions. These forward-looking statements are identified by their use of terms and phrases such as "aim", "ambition", "anticipate", "believe", "could", "estimate", "expect", "goals", "intend", "may", "milestones", "objectives", "outlook", "plan", "probably", "project", "risks", "schedule", "seek", "should", "target", "will" and similar terms and phrases. There are a number of factors that could affect the future operations of Shell and could cause those results to differ materially from those expressed in the forward-looking statements included in this report, including (without limitation): (a) price fluctuations in crude oil and natural gas; (b) changes in demand for Shell's products; (c) currency fluctuations; (d) drilling and production results; (e) reserves estimates; (f) loss of market share and industry competition; (g) environmental and physical risks; (h) risks associated with the identification of suitable potential acquisition properties and targets, and successful negotiation and completion of such transactions; (i) the risk of doing business in developing countries and countries subject to international sanctions; (j) legislative, judicial, fiscal and regulatory developments including regulatory measures addressing climate change; (k) economic and financial market conditions in various countries and regions; (l) political risks, including the risks of expropriation and renegotiation of the terms of contracts with governmental entities, delays or advancements in the approval of projects and delays in the reimbursement for shared costs; (m) risks associated with the impact of pandemics, such as the COVID-19 (coronavirus) outbreak; and (n) changes in trading conditions. No assurance is provided that future dividend payments will match or exceed previous dividend payments. All forward-looking statements contained in this report are expressly qualified in their entirety by the cautionary statements contained or referred to in this section. Readers should not place undue reliance on forward-looking statements. Additional risk factors that may affect future results are contained in Shell plc's Form 20-F for the year ended December 31, 2021 (available at www.shell.com/investor and www.sec.gov). These risk factors also expressly qualify all forward-looking statements contained in this report and should be considered by the reader. Each forward-looking statement speaks only as of the date of this report, April 5, 2022. Neither Shell plc nor any of its subsidiaries undertake any obligation to publicly update or revise any forward-looking statement as a result of new information, future events or other information. In light of these risks, results could differ materially from those stated, implied or inferred from the forward-looking statements contained in this report.

SKY 1.5 SCENARIO

This report may contain data and analysis from Shell's Sky 1.5 scenario. Shell Scenarios are not intended to be projections or forecasts of the future. Shell scenarios including the scenarios contained in the [Report/Booklet/Video/Presentation] are not Shell's strategy or business plan. When developing Shell's strategy, our scenarios are one of many variables that we consider. Ultimately, whether society meets its goals to decarbonize is not within Shell's control. While we intend to travel this journey in step with society, only governments can create the framework for success. The Sky 1.5 scenario starts with data from Shell's Sky scenario, but there are important updates. First, the outlook uses the most recent modelling for the impact and recovery from COVID-19 consistent with a Sky 1.5 scenario narrative. Second, it blends this projection into existing Sky (2018) energy system data by around 2030. Third, the extensive scaleup of nature-based solutions is brought into the core scenario, which benefits from extensive new modelling of that scale-up. (In 2018, nature-based solutions required to achieve 1.5°C above pre-industrial

levels by the end of this century were analysed as a sensitivity to Sky. This analysis was also reviewed and included in the IPCC Special Report on Global Warming of 1.5°C (SR15).) Fourth, our new oil and natural gas supply modelling, with an outlook consistent with the Sky 1.5 narrative and demand, is presented for the first time. Fifth, the Sky 1.5 scenario draws on the latest historical data and estimates to 2020 from various sources, particularly the extensive International Energy Agency energy statistics. As with Sky, this scenario assumes that society achieves the 1.5°C stretch goal of the Paris Agreement. It is rooted in stretching but realistic development dynamics today but explores a goal-oriented way to achieve that ambition. We worked back in designing how this could occur, considering the realities of the situation today and taking into account realistic timescales for change. Of course, there is a range of possible paths in detail that society could take to achieve this goal. Although achieving the goal of the Paris Agreement and the future depicted in Sky 1.5 while maintaining a growing global economy will be extremely challenging, today it is still a technically possible path.

SHELL'S NET CARBON FOOTPRINT

Also, in this report we may refer to Shell's "Net Carbon Footprint" or "Net Carbon Intensity", which include Shell's carbon emissions from the production of our energy products, our suppliers' carbon emissions in supplying energy for that production and our customers' carbon emissions associated with their use of the energy products we sell. Shell only controls its own emissions. The use of the term Shell's "Net Carbon Footprint" or "Net Carbon Intensity" are for convenience only and not intended to suggest these emissions are those of Shell plc or its subsidiaries.

SHELL'S NET-ZERO EMISSIONS TARGET

Shell's operating plan, outlook and budgets are forecasted for a ten-year period and are updated every year. They reflect the current economic environment and what we can reasonably expect to see over the next ten years. Accordingly, they reflect our Scope 1, Scope 2 and Net Carbon Footprint (NCF) targets over the next ten years. However, Shell's operating plans cannot reflect our 2050 net-zero emissions target and 2035 NCF target, as these targets are currently outside our planning period. In the future, as society moves towards net-zero emissions, we expect Shell's operating plans to reflect this movement. However, if society is not net zero in 2050, as of today, there would be significant risk that Shell may not meet this target.

FORWARD LOOKING NON-GAAP MEASURES

This report may contain certain forward-looking non-GAAP measures such as cash capital expenditure and divestments. We are unable to provide a reconciliation of these forward-looking Non-GAAP measures to the most comparable GAAP financial measures because certain information needed to reconcile those Non-GAAP measures to the most comparable GAAP financial measures is dependent on future events some of which are outside the control of Shell, such as oil and gas prices, interest rates and exchange rates. Moreover, estimating such GAAP measures with the required precision necessary to provide a meaningful reconciliation is extremely difficult and could not be accomplished without unreasonable effort. Non-GAAP measures in respect of future periods which cannot be reconciled to the most comparable GAAP financial measure are calculated in a manner which is consistent with the accounting policies applied in Shell plc's consolidated financial statements.

The contents of websites referred to in this report do not form part of this report.

We may have used certain terms, such as resources, in this report that the United States Securities and Exchange Commission (SEC) strictly prohibits us from including in our filings with the SEC. Investors are urged to consider closely the disclosure in our Form 20-F, File No 1-32575, available on the SEC website www.sec.gov.

ADDITIONAL INFORMATION

As used in this Report, "Accountable" is intended to mean: required or expected to justify actions or decisions. The Accountable person does not necessarily implement the action or decision (implementation is usually carried out by the person who is Responsible) but must organise the implementation and verify that the action has been carried out as required. This includes obtaining requisite assurance from Shell companies that the framework is operating effectively. "Responsible" is intended to mean: required or expected to implement actions or decisions. Each Shell company and Shell-operated venture is responsible for its operational performance and compliance with the Shell General Business Principles, Code of Conduct, Statement on Risk Management and Risk Manual, and Standards and Manuals. This includes responsibility for the operationalisation and implementation of Shell Group strategies and policies.

CO_2 compensation does not imply that there is no environmental impact from the production and use of the product as associated emissions remain in the atmosphere. CO_2 compensation is not a substitute for switching to lower emission energy

solutions or reducing the use of fossil fuels. Shell businesses focus first on emissions that can be avoided or reduced and only then, compensate the remaining emissions.

"Carbon neutral" or "CO_2 compensated" indicates that Shell will engage in a transaction where an amount of CO_2 equivalent to the value of the remaining CO_2e emissions associated with the raw material extraction, transport, production, distribution and usage /end-of-life (if Lubricants or other non-energy product) of the product are compensated through the purchase and retirement of carbon credits generated from CO_2 compensation projects. Although these carbon credits have been generated in accordance with international carbon standards, the compensation may not be exact.

CO_2e (CO_2 equivalent) refers to CO_2, CH_4, N_2O.

Divestments is a measure used to monitor the progress of our divestment programme. This measure comprises proceeds from sale of property, plant and equipment and businesses, joint ventures and associates, and other Integrated Gas, Upstream and Downstream investments in equity securities, adjusted onto an accruals basis and for any share consideration received or contingent consideration initially recognised upon the related divestment, as well as proceeds from sale of interests in entities while retaining control (for example, proceeds from sale of interests in Shell Midstream Partners, L.P.).

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