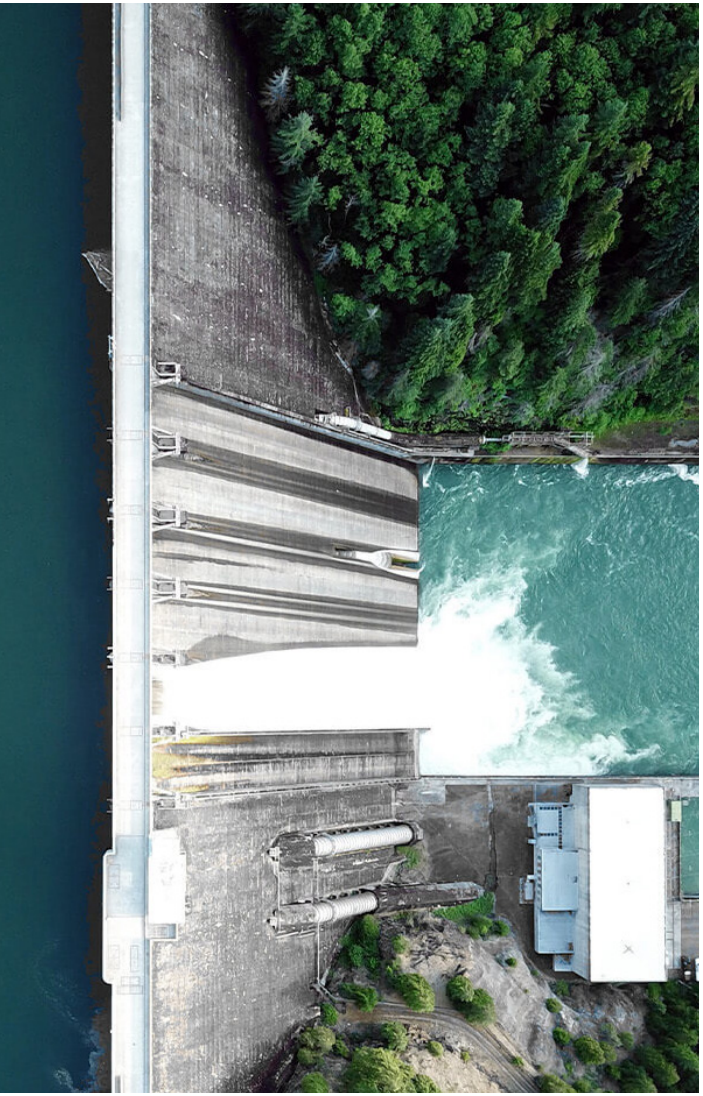
2023



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Appendix 21

A Message From Leadership

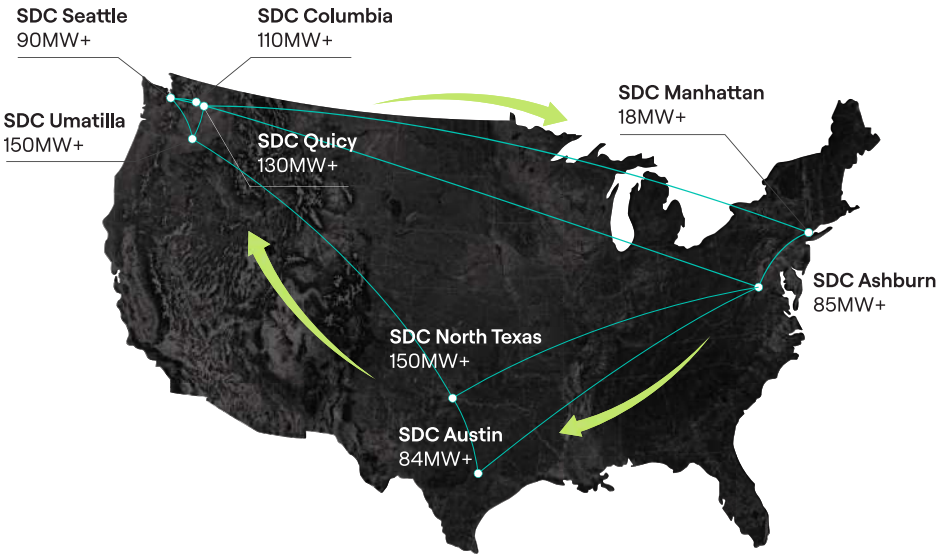
Hello and welcome back to the Sabey Data Centers Sustainability Report. In this version of the report, you will read about the solid progress we made in 2023 toward our primary sustainability goal: “By 2029, double our 2021 MW of IT capacity under management and at the same time eliminate carbon emissions across all Scope 1 and 2 categories.

- Greenhouse Gas Emissions Reduction:
  In 2023, we achieved a 21% reduction in our Scope 1 and Scope 2 emissions compared to our 2018 base year, aligning with our science-based target. This significant decrease underscores our commitment to reducing our environmental footprint.
- Radicle Climate Smart Certification:
  We completed our emissions inventory for the years 2018 through 2023, earning the Radicle Climate Smart Certification. This comprehensive inventory is a crucial step towards effective climate action, as it enables us to measure, track, and understand our emissions better.
- ENERGY STAR Building Certifications:
  Seven of our data center buildings received ENERGY STAR building certifications in 2023. Three of these buildings achieved a score of 99 points on ENERGY STAR’s 1-100 scale. We continue to pursue ENERGY STAR certifications for all eligible buildings, highlighting our dedication to energy efficiency.
- CDP Climate Change Questionnaire:
  Our 2023 response to the CDP’s Climate Change Questionnaire resulted in a “Management” tier score, indicating that Sabey is taking coordinated action on climate issues. This recognition reinforces our leadership in sustainable practices.
- Collaborative Efforts:
  We have strengthened our partnerships with numerous organizations committed to tackling climate change and decarbonization. These collaborations include working with Clean Energy Buyers Alliance (CEBA), The Department of Energy (DOE), The Environmental Protection Agency (EPA), The Climate Pledge, the Science Based Targets initiative (SBTi), CDP, EcoVadis, GRESB, Climate Smart, and our data center tenants. Together, we are driving meaningful change within our industry and beyond.

The challenge to eliminate emissions grows as we expand to meet customer demand that seems to have no limit. All of our sustainability progress has come from the implementation of ideas that originate with you, the members of our team. The biggest, boldest, most impactful ideas are still out there. Bring them to the table and let’s go!

Rob Rockwood
President
Sabey Data Centers

Our Commitment



Sabey Data Centers is committed to being an industry leader in sustainability. Focusing on the triple bottom line of people, planet, profits - Sabey builds and maintains energy efficient data centers that reduce impact on the environment, aligning with our customer's sustainability needs.

Sabey owns and operates six data center campuses across Washington, Virginia, New York, and Texas. The entire data center portfolio currently includes 21 buildings. SDC Umatilla and SDC North Texas are currently under development.

United Nations Sustainable Development Goals

Sabey uses the United Nations Sustainable Development Goals (SDGs) to guide our business practices. Sabey's has targeted nine SDGs to guide our sustainability efforts. Sabey builds, designs, and operates highly energy efficient data centers (SDG 9, SDG 11, and SDG 12), naturally aligning us to combat climate change (SDG 13). Our business model is to provide low-cost, renewable energy (SDG 7) to our customers whenever possible. Many of our utility providers in Washington source their energy from hydroelectricity. These utilities take great care in protecting the wildlife and plant life in the surrounding rivers and tributaries (SDG 14 and SDG 15). Water is a critical resource for all life, and our business seeks to use water responsibly by recycling industrial water and using wastewater for irrigation (SDG 6 and SDG 15). Sabey partners with a myriad of organizations to meet these goals (SDG 17), including partnerships with our utilities, customers, and other external organizations seeking to be responsible stewards of our planet.

Preservation Texas

Fueled by volunteers and the love of plants, the mission of the Native Plant Society of Texas (NPSOT) is “to promote research, conservation and utilization of native plants...”. Founded in 1981 in Denton, TX. NPSOT strives to preserve plant species by harvesting and re-homing them from various locations around the nation.

Fortunately, Sabey Data Centers got the chance to be a part of one of these plant rescues before we started the construction of our newest campus in Round Rock, TX (SDC Austin). Over the course of a blazing hot Texas summer day, volunteers from the organization, working with SDC team members were able to save over 20 varieties of native plants, two of which were deemed rare species.

The seeds, cuttings and transplants from the yet-to-be developed land were then utilized for restoration projects, preserves and even an NPSOT plant sale. NPSOT plans to come back out before the next phase of construction begins on our Round Rock campus.

There is a Native Plant Society in nearly every state, and Sabey Data Centers is dedicated to working with volunteers any time we build to ensure we’re preserving the natural history of the local flora wherever we build.

Organizational Involvement

ENERGY STAR

Sabey Data Centers is a proud ENERGY STAR Partner that consistently ranks at the very highest levels for building certifications by meeting strict EPA energy performance standards. A minimum score of 75 signifies that a building outperforms at least 75% of similar data centers, yet Sabey Data Centers routinely score up to 100 on the scale.

Green Lease Leaders

Sabey received Gold recognition from the Green Lease Leaders program. The Green Lease Leaders program recognizes forward-thinking companies who foster high-performance by incorporating both energy efficiency and sustainability into its operating requirements.

Better Buildings Challenge

The U.S. DOE Better Buildings Challenge is aimed at reducing energy use throughout businesses' portfolios by at least 20% over 10 years. Sabey has improved energy performance by 42% from a 2014 baseline, far surpassing this goal and was recognized as the Highest Energy Saving Data Center Operator by the DOE in 2017.

Better Climate Challenge

Sabey Data Centers signed on to the Better Climate Challenge committing to a 50% reduction in GHG emissions across their 3.8 million-square-foot portfolio over 10 years.

Organizational Involvement

Science Based Targets initiative

Sabey has committed to set a portfolio-wide carbon emissions target to meet the most ambitious aim of the Paris Agreement – to limit global temperature rise to 1.5 degrees Celsius above pre-industrial levels. Our goal and method was validated by the Science Based Targets initiative (SBTi).

The Climate Pledge

Sabey is a signatory to The Climate Pledge, a collaborative initiative co-founded by Amazon and Global Optimisms with a commitment to reach net-zero carbon by 2040.

GRESB & Clean Energy Buyers Alliance

Sabey submits comprehensive annual reports through GRESB, and is an active member of the Clean Energy Buyers Alliance (CEBA).

CDP

Sabey submits annual reports to CDP's Climate Change Questionnaire. Customers can request access to Sabey's CDP response through CDP's online portal.

Sustainable Building Certifications

Campus	Building	ENERGY STAR Certified
SDC Ashburn	Building B	91/100
	Building C	91/100
SDC Columbia	Building D	99/100
SDC Quincy	Building A	98/100
	Building B	99/100
	Building C	99/100
SDC Seattle (East)	Building 4	96/100

Pledges to Net-Zero Carbon Emissions

Sabey has made ambitious commitments to reach net-zero carbon emissions. According to the SBTI Corporate Net-Zero Standard, net-zero is defined as "reducing Scope 1, 2, and 3 emissions to zero or residual level..., [and] neutralizing any residual emissions...." Pathways to reach net-zero include using renewable energy mechanisms (like RECs and vPPAs).

Scope 1

Direct emissions from operations. Specifically diesel emissions from backup generators, and fugitive emissions from HVAC refrigerants

Scope 2

Indirect emissions from purchased electricity. Specifically purchased electricity used to power data center infrastructure.

Scope 3

All other indirect emissions, including indirect emissions from customer IT equipment.

The Most Ambitious: Sabey's BHAG

Sabey Data Centers has committed to be net-zero carbon emissions by 2029 across all Scope 1 and Scope 2 emissions. Scope 3 emissions will be measured and aggressively reduced through various internal activities.

Science Based Target initiative (SBTi)

In 2021, Sabey's net-zero goals were validated by the Science Based Target's initiative. Net-zero targets are considered 'science-based' "if they are in line with what the latest climate science deems necessary to meet the goals of the Paris Agreement – limiting global warning to well-below 2 degrees Celsius above pre-industrial levels and pursuing efforts to limit warning to 1.5 degrees Celsius," (SBTi). Sabey is considered a "Small and Medium-Sized Enterprise" (SME) by the SBTi. As a SME, Sabey's science-based target was submitted and validated through a streamlined route that allowed Sabey to select from one of two predefined target options.

Sabey's science-based target: "Sabey commits to reduce absolute Scope 1 and Scope 2 GHG emissions 50% by 2030 from a 2018 base year, and to measure and reduce its Scope 3 emissions."

Through SBTi, Sabey is required to publicly report portfolio-wide GHG emissions and progress against targets on an annual basis.

The Department of Energy's (DOE) Better Climate Challenge

Sabey signed on to the Better Climate Challenge, committing to a 50% reduction in Scope 1 and Scope 2 GHG emissions across the entire portfolio over 10 years. Sabey must meet the 50% reduction target without using GHG offsets and is required to report Scope 1 and Scope 2 GHG emissions annually.

The Climate Pledge

Sabey joined The Climate Pledge, committing to be net-zero carbon by 2040, reaching the goals of the Paris Agreement 10 years early.

The three principal requirements of The Climate pledge are 1) annual reporting of emissions; 2) carbon elimination through efficiency, renewable energy, and materials reductions; and, 3) neutralizing any remaining emissions with credible offsets.

Roadmap to Net-Zero

As Sabey's business grows, so does our carbon footprint. Our goal is to change that relationship – by 2029, we plan to reduce our Scope 1 and Scope 2 carbon emissions to net-zero while our business continues to grow.

Sabey follows three principals as we pursue net-zero carbon:

1. Annual reporting of emissions;
2. Carbon elimination through energy efficiency, renewable and/or carbon-free energy, and materials reductions;
3. Neutralizing any remaining emissions with credible offsets.

Emissions reduction pathways

Sabey will focus on the following areas:

Scope 1

- Transition to green fuels: transition away from diesel fuel for backup generators as alternatives become available and reliable. Alternatives to diesel fuel may include natural gas or renewable diesel;
- Reduce fugitive HVAC emissions: manage and reduce fugitive emissions from HVAC refrigerants by working directly with our HVAC service providers;
- Offset: Carbon offsets may be procured to "offset" any remaining Scope 1 emissions.

Scope 2

- Energy efficiency: manage and improve overall energy efficiency throughout all data centers to reduce energy consumption, where possible. Power Utilization Effectiveness ("PUE") is monitored across all of our managed data centers;
- Renewable energy: invest in renewable energy through purchase of Renewable Energy Certificates (RECs), purchase of renewable energy through utilities, and/or through Power Purchase Agreements (PPAs).
    - In 2023, Sabey reduced Scope 2 emissions by 21% from a 2018 base year. We will continue to reduce our Scope 2 emissions by 4.2% each year thereafter until 2029 when we will reduce our Scope 2 emissions by 100%. Our current strategy to reduce our Scope 2 emissions is to procure RECs, but we are iteratively exploring other options, including on-site renewable energy and/or VPPAs.

Scope 3

- Downstream leased assets: Assist our customers with understanding the energy consumption from their IT equipment (servers). Upon request, help procure renewable energy to offset their emissions;
- Upstream supply chain: engage with upstream supply chain to reduce emissions. Upstream supply chain emissions include: purchased goods and services – including embodied carbon in building materials, waste generated in operations, business travel, and employee commuting.

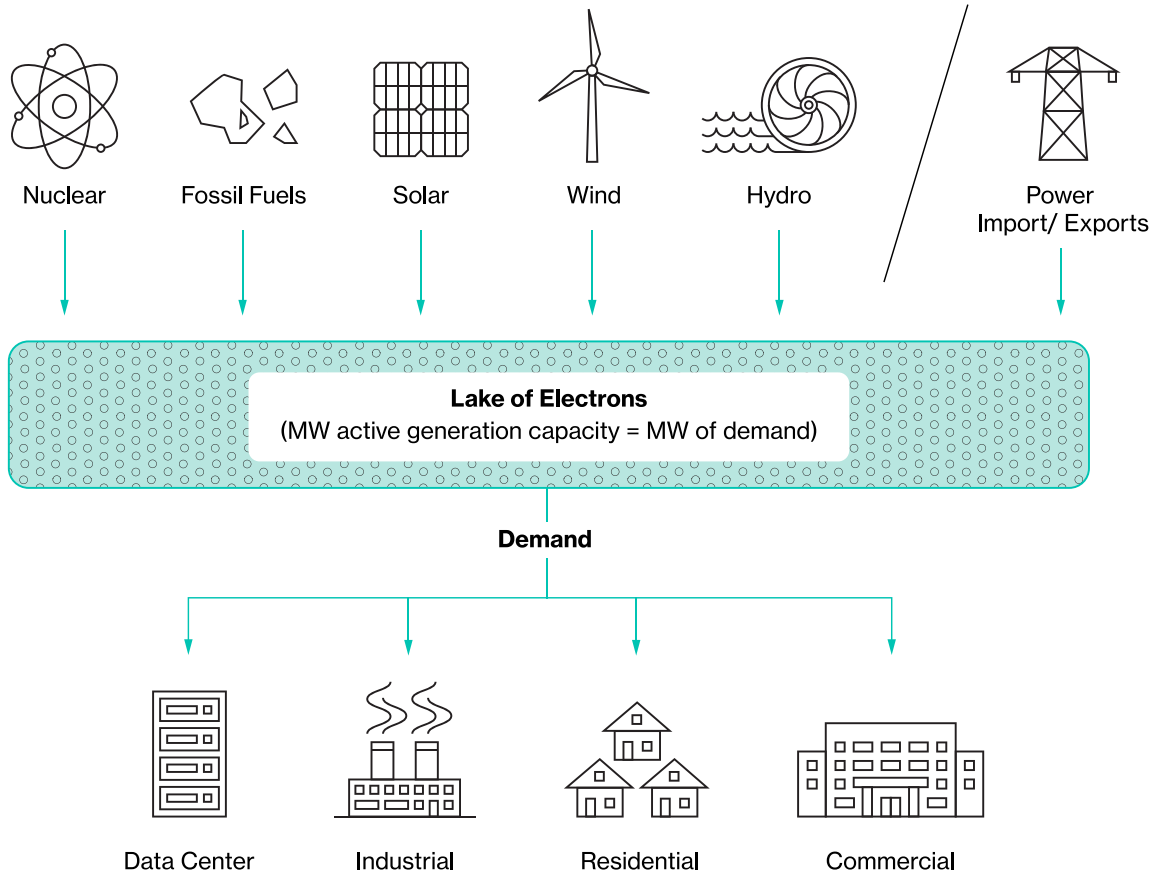
Utility Fuel Mix

What is a fuel mix?

The electricity our data centers use is generated from a mix of different energy sources, referred to as a fuel mix. A fuel mix represents the ratio of different energy sources, like hydro, nuclear, or coal. The fuel mixes vary[1] across our data center portfolio.

Figure 1 illustrates how no single energy source powers our data centers. The various energy sources create a "lake of electrons" which then generate power.

Figure 1: Fuel Mix Diagram



[1] It can be difficult to get accurate fuel mix data – some utilities report their annual average fuel mixes, while others do not. In instances where utilities do not report their annual fuel mix data, data can be retrieved from the Independent System Operator ("ISO") or from EPA's Emissions and Generation Resource Integrated Database (eGRID). Fuel mix data can vary depending on the granularity of the data available. Because of this, the fuel mix data that we collect may not accurately represent the actual electricity consumed at our data centers.

Utility Fuel Mix

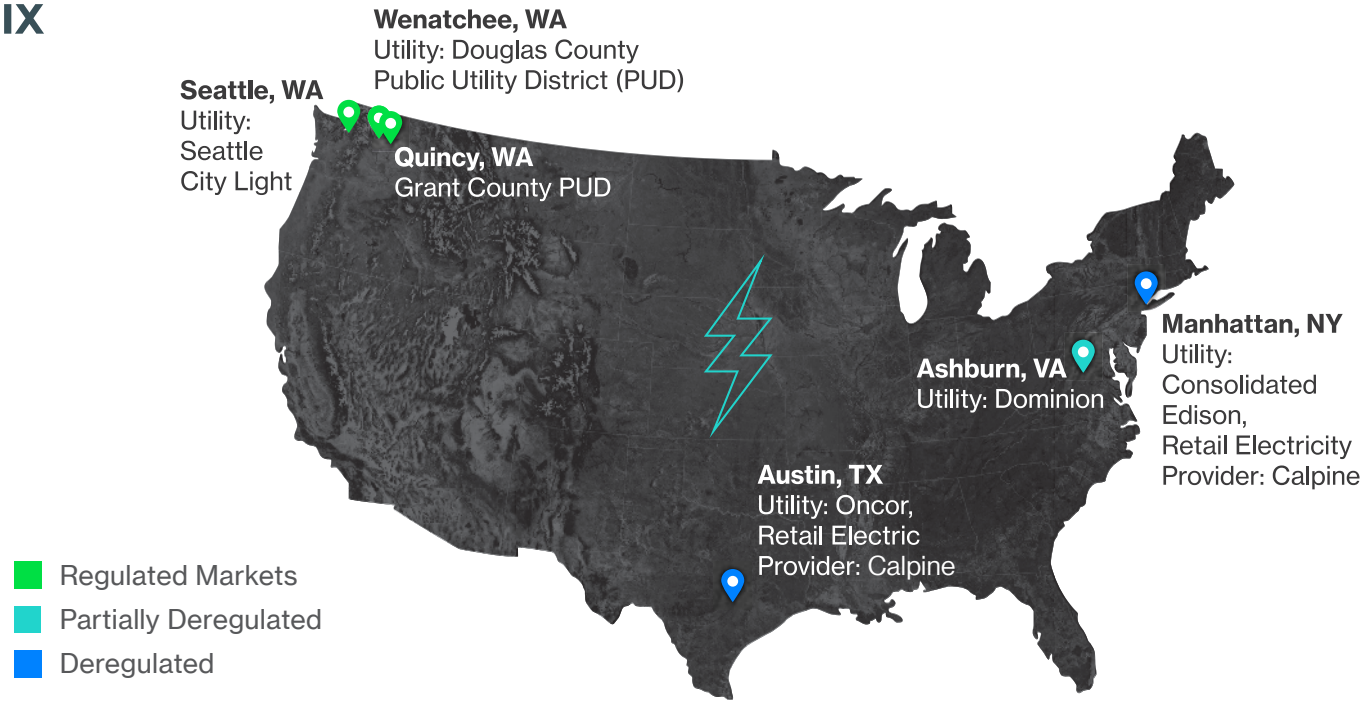
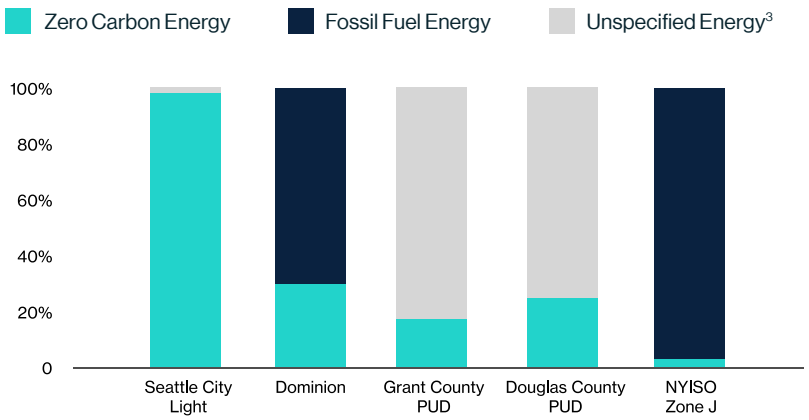


Figure 2: 2023 Fuel Mix[2]



[2] Specific fuel mix percentages and their sources can be found in Appendix B.

[3] Unspecified energy refers to power purchases where the generation facility and fuel source information is not known. This term comes from the Washington State Department of Commerce's Fuel Mix Disclosures.

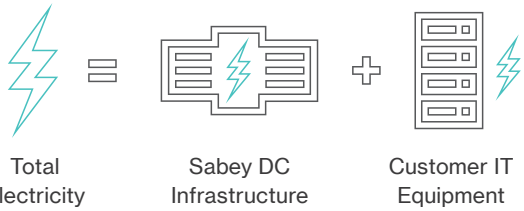
Greenhouse Gas (GHG) Emissions Accounting

Sabey follows the operational control approach under the GHG Protocol Corporate Accounting and Reporting Standard.

Sabey is a member of the Clean Energy Buyers Alliance (CEBA) and the Future of Internet Power (FoIP), organizations that provide data center specific guidance for GHG reporting and accounting. Sabey's data center spaces follow guidance from the FoIP that distinguishes between Sabey's Scope 2 emissions and our customer's Scope 2 emissions.

Sabey's Scope 2 emissions are from purchased electricity that power data center infrastructure, and our customer's Scope 2 emissions are from purchased electricity used to power their IT equipment ("Critical Load Power").

Upon customer request, Sabey will provide customers with RECs for the customer's Critical Load Power (i.e. electricity from IT equipment) as a component of Sabey's compensated services. As a future initiative, Sabey will survey all data center customers to determine whether they have obtained RECs for their Scope 2 or Scope 3 emissions.



What is a metric ton of CO_2e?

1 metric ton of CO_2e equals

113 gallons
of gasoline consumed

121,643
smartphones charged

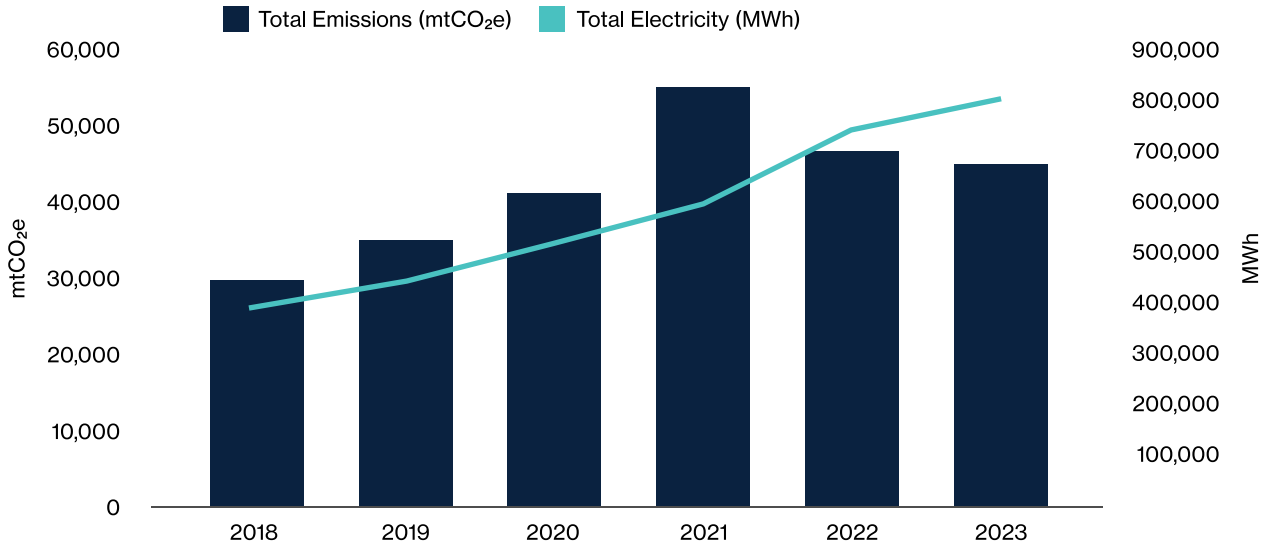
46
BBQ Propane Tanks

2,564 miles
driven by an average gasoline-powered car

Net emissions[4] continued to decrease in 2023 despite consistent business growth.

Electricity use continues to increase with business growth. Increased electricity use has historically been correlated with increased emissions[5], but that relationship changed in 2022 and continues to decline in 2023.

Figure 3: Net Emissions & Electricity Use



Our business has obtained its Radicle Climate Smart Certification, which provides third-party review of our GHG emissions inventory. Learn more about this latest achievement at: https://radiclebalance.com/

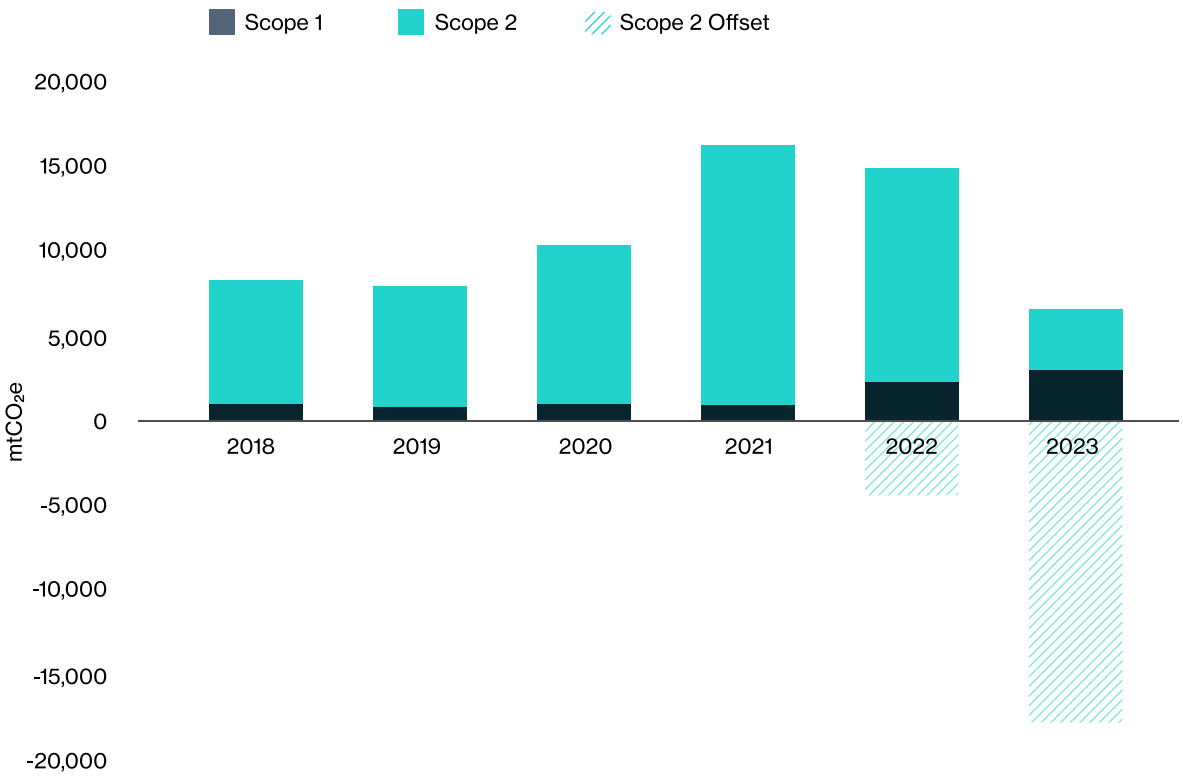
[4] Net emissions include Scope 1, Scope 2, and Scope 3 emissions.

[5] Carbon emissions reported in the "GHG Emissions: 2018-2023" section are market-based carbon emissions and are reported in metric tons of CO_2 equivalent ($mtCO_2e$). The unit $mtCO_2e$ represents the number of metric tons of CO_2 emissions with the same global warming potential as one metric ton of another greenhouse gas.

Scope 1 and Scope 2 emissions decreased by 21% in 2023 from a 2018 base year.

Sabey's science-based target requires us to incrementally reduce our absolute Scope 1 and Scope 2 carbon emissions each year[6]. Our decrease in emissions since 2021 is due to renewable energy purchases.

Figure 4: Science-based Target: Total Scope 1 & Scope 2 Emissions

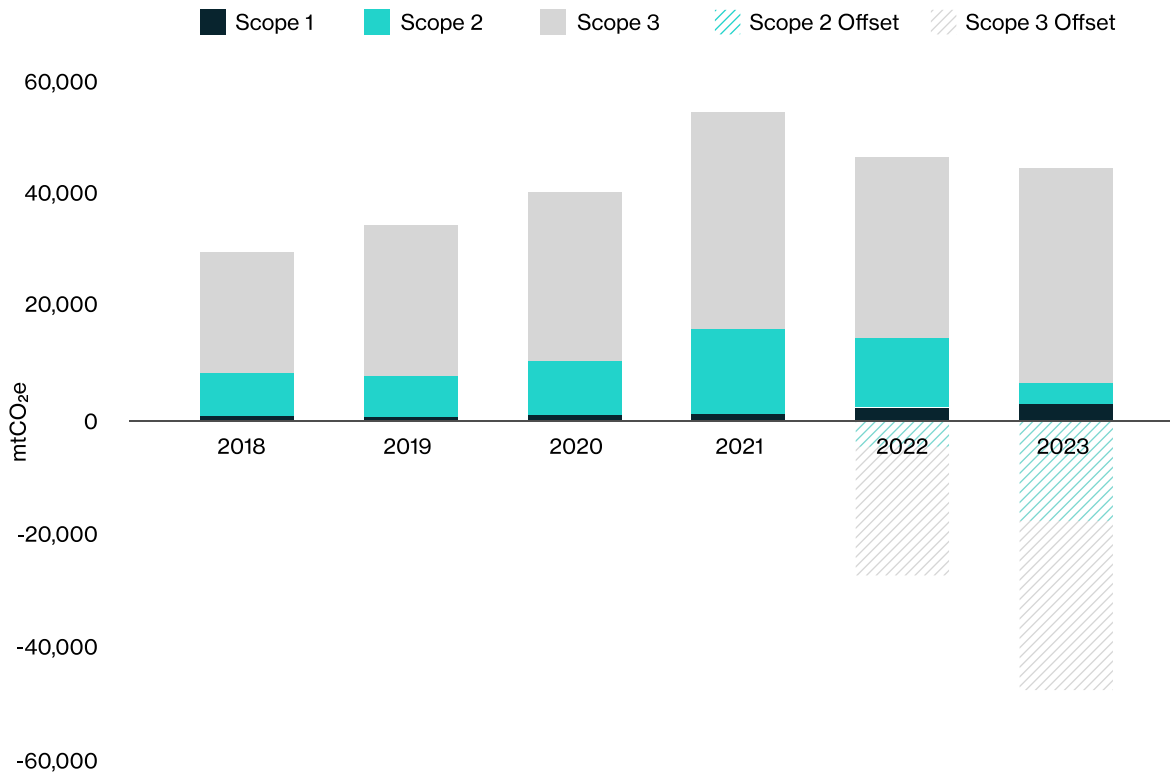


[6] Renewable energy offsets were not tracked between 2018-2021.

Scope 3 emissions are our largest source of GHG emissions.

Scope 3 emissions account for about 74% of our total emissions each year. Our tenants' servers account for the vast majority of those emissions (73%). The remaining 1% of Scope 3 emissions is from landfill emissions and employee commuting.

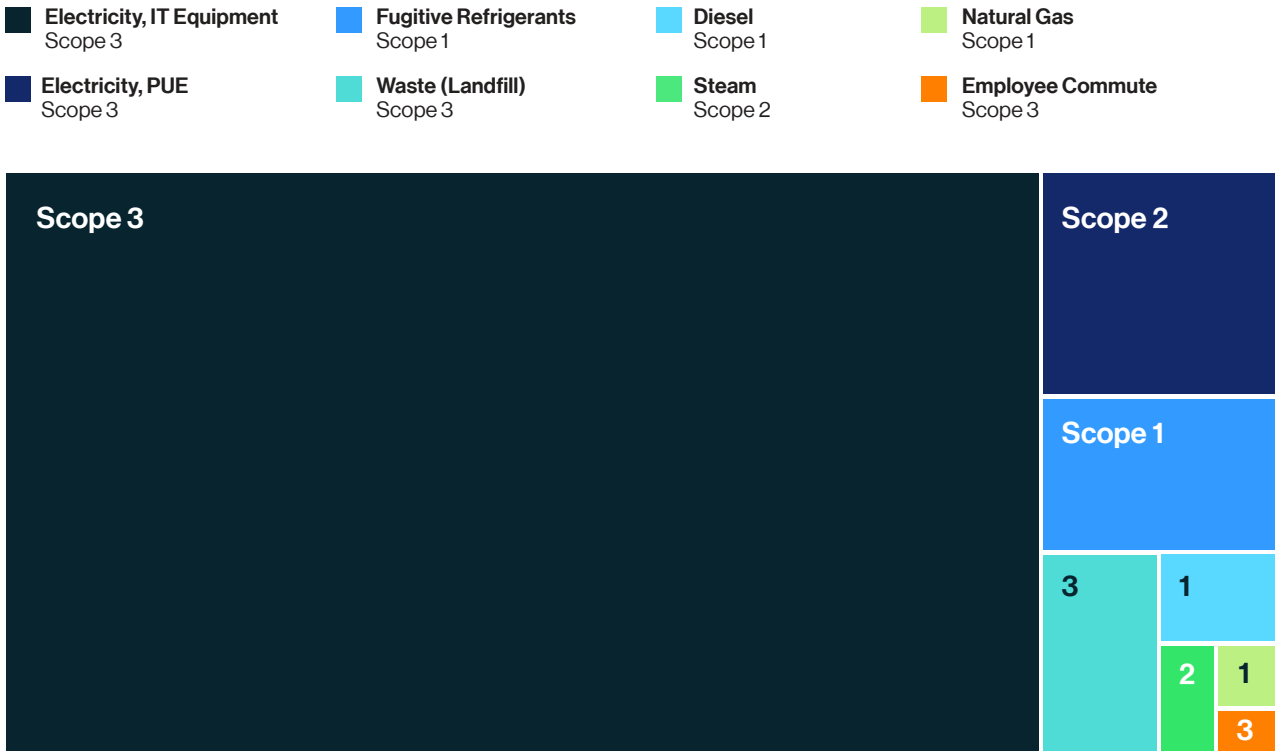
Figure 5: Total Scope 1, Scope 2, & Scope 3 Emissions



Electricity emissions account for the vast majority of our overall GHG emissions.

The vast majority of our emissions, about 95% each year, come from the emissions associated with electricity (our Scope 2 and Scope 3 emissions). Our tenants' servers (our Scope 3) account for about 74% of our total emissions each year, while data center infrastructure (e.g. cooling and lighting – our Scope 2) account for about 21% of our total emissions each year. Emissions from diesel, fugitive HVAC emissions, and natural gas (Scope 1) account for about 5% of our total emissions each year.

Figure 6: 2023 Net Carbon Emissions, by Source



A. GHG Emission Factors and Sources (Location-based and Market-based)

Account Methodology	Site/Utility	2022 Emissions Factor	Source
Location-based	SDC Ashburn - Dominion Power (Virginia)	0.323 $mtCO_2e/MWh$	Administration (EIA), 2022. 'U.S. Electric Power Industry Estimated Emissions by State, 1990-2019'. Divided value by 'Net Generation by State by Type of Producer by Energy Source, 1990-2019'.
	SDC Quincy - Grant County PUD	0.111 $mtCO_2e/MWh$	
	SDC Columbia - Douglas County PUD	0.111 $mtCO_2e/MWh$	
	SDC Manhattan - Consolidated Edison (TDSP) and Calpine Energy (Retail Electric Supplier)	0.202 $mtCO_2e/MWh$	
	SDC Seattle East & West - Seattle City Light	0.111 $mtCO_2e/MWh$	
Market-based	SDC Ashburn - Dominion Power (Virginia)	0.300 $mtCO_2e/MWh$	https://www.eei.org/issues-and-policy/national-corporate-customers/co2emissions-access
	SDC Quincy - Grant County PUD	0.184 $mtCO_2e/MWh$	Grant County Public Utility District
	SDC Columbia - Douglas County PUD	0 $mtCO_2e/MWh$	Emissions and Generation Resource Integrated Database (eGRID), Sheet 5, Balancing Authority PUD No. 1 of Douglas County
	SDC Manhattan - Consolidated Edison (TDSP) and Calpine Energy (Retail Electric Supplier)	0.402 $mtCO_2e/MWh$	Emissions and Generation Resource Integrated Database (eGRID), Sheet 6, Subregion: NYCW
	IGE, IGW - Seattle City Light	0 $mtCO_2e/MWh$	Utility is carbon neutral, and directed customers to zero out carbon emissions.

B. Fuel Mix Data for SDC Campuses (2022 Data)

	Fuel Type	Percent
Grant County PUD	Unspecified	83.05%
	Hydro	16.35%
	Nuclear	0.12%
	Wind	0.48%
Seattle City Light	Biogas	1.07%
	Hydro	88.01%
	Nuclear	4.16%
	Wind	5.22%
	Unspecified	1.54%
Douglas County PUD	Hydro	22.88%
	Wind	1.62%
	Unspecified	75.50%
Dominion	Nuclear	28.30%
	Coal	7.90%
	Biomass	1.20%
	Oil & Gas	36.90%
	Solar	0.80%
	Wind	0.00%
	Pumped Storage	0.00%
	Hydro	0.04%
	Purchased Power	24.50%
NYISO, Zone J	Oil & Gas	92%
	Hydro	2%
	Pumped Storage	5%
	Other Renewables	1%