



Task Force on Climate-related Financial Disclosures (TCFD)

2023 REPORT

Introduction

Comcast Corporation and its consolidated subsidiaries (“Comcast,” “we,” “us,” and “our”) believe in protecting the environment where we live and work to help foster a more sustainable planet now – and long into the future. To provide transparency and help drive improvement, we report data using the Greenhouse Gas (GHG) Protocol and the Sustainability Accounting Standards Board (SASB) standards.

We have prepared this report for our stakeholders, including our employees, customers, suppliers, shareholders, and the communities where we operate. The inclusion of information in or incorporated into this report should not be construed as a characterization of the materiality or financial impact of such information with respect to our company.¹

We recognize the importance of having the appropriate processes in place to effectively identify, assess, and manage significant climate-related risks and opportunities, and to evaluate the actual and potential impacts of such risks and opportunities on our revenue, operations, and business continuity, as well as other financial planning impacts. For a detailed discussion of these processes, as well as the governance structure we have in place to oversee our most significant climate-related risks and opportunities, see the *Governance, Strategy and Risk Management* sections of this report.

In May 2021, Comcast set a goal to be carbon neutral by 2035 for Scope 1 and 2 emissions across our global operations. We’re proud of the progress we have already made, reducing our market-based, enterprise-wide Scope 1 and 2 GHG emissions by 38% from our base year of 2019 to year-end 2022. We also calculate and report our Scope 3 emissions from a 2019 base year. In 2022, we joined the Science Based Targets initiative (SBTi) on climate action, committing to set near-term emission reduction goals in line with science-based pathways.

For more information on our carbon footprint and our progress toward our carbon neutral goal, see the *Metrics and Targets* section of this report, as well as our [Carbon Footprint Data Report](#), the [Environment](#) page of our website and our annual [Impact Report](#).

¹This report includes statements that may constitute “forward-looking statements” within the meaning of the Private Securities Litigation Reform Act of 1995, Section 27A of the Securities Act of 1933, and Section 21E of the Securities Exchange Act of 1934. Forward-looking statements are not historical facts or statements of current conditions, but instead represent only our beliefs regarding future events, many of which, by their nature, are inherently uncertain and outside of our control. These may include estimates, projections and statements relating to our business plans, objectives and expected operating results and statements regarding environmental, social and governance-related plans and goals, which are based on current expectations and assumptions that are subject to risks and uncertainties that may cause actual results to differ materially. These forward-looking statements are generally identified by words such as “believe,” “project,” “expect,” “anticipate,” “estimate,” “intend,” “potential,” “strategy,” “future,” “opportunity,” “commit,” “plan,” “goal,” “may,” “should,” “could,” “will,” “would,” “will be,” “will continue,” “will likely result” and similar expressions. Factors that could cause actual results to differ materially from these forward-looking statements include changes in and/or risks associated with: the competitive environment; consumer behavior; the advertising market; programming costs; consumer acceptance of our content; key distribution and/or licensing agreements; use and protection of our intellectual property; our reliance on third-party hardware, software and operational support; keeping pace with technological developments; cyber attacks, security breaches or technology disruptions; weak economic conditions; acquisitions and strategic initiatives; operating businesses internationally; natural disasters, severe weather-related and other uncontrollable events; loss of key personnel; laws and regulations; adverse decisions in litigation or governmental investigations; labor disputes; and other risks described from time to time in reports and other documents we file with the Securities and Exchange Commission (“SEC”). In evaluating these statements, you should consider various factors, including the risks and uncertainties we describe in the “Risk Factors” sections of our most recent Annual Report on Form 10-K, our most recent Quarterly Report on Form 10-Q and other reports we file with the SEC. For a discussion of the risks and challenges we may face in meeting our environmental goals, see also our annual [Impact Report](#). Forward-looking statements may contain estimates, make assumptions based on developing standards that may change, and provide aspirational goals and commitments that are not intended to be promises or guarantees. Readers are cautioned not to place undue reliance on forward-looking statements, which speak only as of the date they are made. We undertake no obligation to update or revise publicly any forward-looking, whether because of new information, future events or otherwise.

Governance

Our existing risk management and decision-making processes incorporate the management of significant climate-related risks and opportunities as appropriate.

Board Oversight

Our Board understands the significant risks facing our company, including those related to material ESG issues. Our Board, as a whole and through its committees, exercises an appropriate degree of risk oversight. Our management, with involvement and input from our Board, performs an annual companywide enterprise risk management (ERM) assessment to identify and manage key existing and emerging risks for our company.

While climate-specific risks are not financially material to our company today and are not a standalone core enterprise risk, our Board and its committees exercise their respective roles in strategy and risk oversight and oversight of ESG matters in a variety of ways, including the following that may relate to climate change:

Board of Directors	Oversees risks associated with the company's reputation, which may include the company's climate-related activities.
Governance and Corporate Responsibility Committee	Periodically reviews and assesses the company's annual Impact Report and the company's significant ESG issues, risks and trends, including as appropriate our climate-related strategies and initiatives.
Audit Committee	Oversees the company's ERM assessment process, and reviews the company's policies, practices and assessments with respect to significant business risks relating to business continuity, such as those risks arising from severe weather events.
Compensation and Human Capital Committee	Identifies goals and objectives relevant to executive compensation, including the company's short-term annual bonus program which includes a component tied to stakeholder and sustainability measures, including environmental initiatives.

For more information, see our [committee charters](#).

Management Oversight

Our executive management team has the overall responsibility for our ERM process, and an ERM steering committee composed of legal, financial, and business executives manages the process, with one or more senior business executives then monitoring and managing each of the identified risks.

In addition, Comcast has two management committees that oversee governance of environmental sustainability for the enterprise – a senior executive-level committee and an operational committee.

The Executive Environmental Committee, chaired by Comcast's Chief Financial Officer and Chief Legal Officer, meets periodically with members of our Environment Operating and Governance Committee (EOGC) to assess and manage climate-related risks and opportunities and develop and approve environmental sustainability strategy, targets, and results.

The EOGC, chaired by Comcast's Senior Vice President of Corporate Environmental Sustainability, defines strategies across our businesses to address climate-related risks, realize climate-related opportunities, and prioritize activities from a financial planning perspective that will help us attain our 2035 carbon neutral goal. This committee meets periodically and is comprised of executives from each business unit across multiple functions including procurement, strategy, finance, accounting, legal, and other operational functions.

Each of our businesses has also developed its own tailored climate-related strategies and initiatives given the nature of its respective business, which are reviewed and discussed at the EOGC.

Strategy

We are committed to fostering a cleaner, healthier environment. That is why we have set a goal to be carbon neutral in our Scope 1 and 2 emissions by 2035. We have integrated this goal into our climate strategy and developed an internal plan to achieve this goal, prioritizing emissions reduction activities. The current focus for our Scope 1 and 2 emissions decarbonization is to procure more clean and renewable energy, reduce emissions from our vehicle fleet through operational improvements, and improve energy efficiency in our operations, including within our hybrid fiber-optic and coaxial (HFC) cable network. To this end, in 2022, Comcast announced plans to double our network energy efficiency by 2030, cutting the electricity per consumed byte (EPCB) of data in half. We have also committed to setting near-term emission reduction goals for Scopes 1, 2, and 3 with the SBTi. In addition, we seek to identify, understand, mitigate, and manage the climate-related risks and opportunities that could meaningfully impact our businesses.

Part of Comcast's ongoing strategy is to minimize the effects on our operations from extreme weather events such as hurricanes, wildfires, and floods. Such events can negatively impact the products and services delivered through our domestic network to some portion of our 32 million residential and business broadband customers, as of the end of 2022. Such events may also have short-term impacts on operations at our theme parks, production studios, or other businesses. The cost to respond to damage from extreme weather, as well as the ongoing work to improve the resiliency of our network and operations during extreme weather events, are incorporated into our annual budget planning process and our annual long-range planning (LRP) process, which covers financial planning over the next 5 years. We take steps to enhance our organizational resilience to acute weather events in the normal course of our business, some of which are described in the *Example Climate-related Risks* section below.

Various climate-related risks are components of several of the company's enterprise risks identified through our annual ERM process, such as the risk of severe weather events impacting business continuity mentioned above. These enterprise risks, including relevant climate-related risks, are managed by the operational owners of such risks so that mitigation is considered within the broader risk mitigation plan. At this time, Comcast has not identified climate-related risks that are independent of the material operational enterprise risks we have identified through the ERM process, and we have

not performed a stand-alone qualitative or quantitative climate-related scenario analysis

See the *Integrated Risk Management* section below for more information.

In the sections that follow, we give examples of some of the more meaningful climate-related risks and opportunities we have identified. For more information on our climate-related risks and opportunities, see our annual [CDP Climate Change response](#).

Example Climate-related Risks

The following are examples of specific climate-related risks that may impact our businesses.

Risk Category	Risk Description	Examples of How We Seek to Mitigate
Physical Risks		
Acute Physical	Acute physical impacts, such as extreme weather events, could cause disruption to our theme park operations, our HFC cable network, or our broadcasting infrastructure and network and may result in reduced or lost services for our customers.	<ul style="list-style-type: none"> Building resiliency into our network design and operations, including enabling multiple data paths in the network, hardening the infrastructure at critical locations with energy storage and standby generators, and investing in standby power supplies to power the local network in case of local utility power outages. Evaluating critical assets, high-value locations, and new site selections for climate-related physical risk exposure, leveraging external data from FEMA, including their National Risk Index (NRI) and Resilience Analysis Planning Tool (RAPT), and others, and determining or revising appropriate design parameters and risk levels.
Chronic Physical	Chronic physical impacts, such as long-term changes in climate and weather patterns, water shortages, or sea-level rise, could cause disruption or force adjustments to our operations over the long-term.	<ul style="list-style-type: none"> Maintaining business continuity and disaster response plans where risks and mitigation procedures are considered to help ensure operational stability and safety of employees and customers in the event of an extreme weather event. Building geographic diversity in our supply chain and supplier manufacturing footprint for critical products and maintaining appropriate levels of inventory to manage through any disruptions.

Risk Category	Risk Description	Examples of How We Seek to Mitigate
Transition Risks		
Regulatory and Legal	Increased or changing climate-related rules and regulations in the jurisdictions in which we operate, which could lead to increased operational costs, compliance burdens, and/or litigation. Such risks could be exacerbated by regulations that are enacted now but rely on future improvements in public infrastructure.	<ul style="list-style-type: none"> Tracking relevant current and emerging regulations. Building investments needed to comply with new regulations (e.g., the California Advanced Clean Fleet measure that will require a phased transition to zero-emission vehicles for fleet vehicles that are well suited for electrification) into annual budget and long-range plans. Participating in the industry-wide Set-Top Box and Small Network Equipment Voluntary Agreements that aim to improve energy efficiency of consumer devices which deliver our services. Continuing to decarbonize our Scope 1 and 2 GHG emissions towards our goal of carbon neutral by 2035, which may reduce potential regulatory exposure to future requirements based on an entity's GHG emissions.
Technology	Dependence on technological advancement and adequate supply of low-carbon energy sources and energy infrastructure, including on underlying operators, in the markets where we operate around the world to support our operations in the transition to a low-carbon economy.	<ul style="list-style-type: none"> Developing long-term energy demand projections and securing long-term supply contracts for clean and renewable energy to reduce risk of development and availability of low-carbon energy sources. Continuing to pursue energy efficiency and reduction initiatives in our network, theme parks, data centers, facilities, and other global operations to reduce some of our dependency on energy infrastructure and technology, including by: Continuing to invest in virtualization of our HFC cable network and supporting infrastructure to improve network energy efficiency, working towards our goal to double our network's energy efficiency by 2030, cutting the EPCB in half. Investing in projects and products that may eventually support lower emissions operations, products, or supply chain (e.g., building management systems, high-efficiency heat pumps, on-site solar systems).

Risk Category	Risk Description	Examples of How We Seek to Mitigate
Transition Risks		
Market	Increased operational costs due to changing input prices (e.g., energy, water, supply chain) or output requirements (e.g., energy efficiency, waste treatment).	<ul style="list-style-type: none"> Continuing to pursue energy efficiency and reduction initiatives in our network, theme parks, data centers, facilities, and other global operations to minimize exposure to negative market changes. Securing long-term supply contracts for clean and renewable energy in both deregulated and regulated markets. Continuing to build geographic diversity and supplier reliability, redundancy, and business continuity planning in our supply chain. Better designing products and operational infrastructure for refurbishment, reuses, and recycling in support of a circular economy to reduce the use of raw materials.
Reputation	Brand and reputation risk from our company's environmental impact or speed of action around climate or energy, or the climate resilience of our products and services.	<ul style="list-style-type: none"> Continuing measures that will reduce our Scope 1 and 2 GHG emissions towards our 2035 carbon neutral goal over time. Developing near-term science-based reduction targets across Scopes 1,2, and 3 GHG emissions through the SBTi. Developed a Code of Conduct for Suppliers and Business Partners, which includes key provisions around business continuity and sustainable practices.

Acute Physical Risk: Extreme Weather Events

Of the risks described above, the only one that we have identified to date as having the potential to significantly impact our business is acute physical risk. Extreme weather events may result in lost revenue and expenditures to repair or replace damaged infrastructure, products, and services and could lead to litigation and fines, including if we inadvertently contributed to damages suffered by others. Example expenditure costs include temporary backup power to affected facilities to repair or maintain services, repair costs for our facilities, parks, network, and equipment when physical damage occurs, and the labor cost associated with these repairs. While we have incurred costs and lost revenue for extreme weather events in the past, severe weather events to date have not had a material adverse effect on the Company's results of operations or financial condition.

For example, as of the end of 2022, our domestic network provided services to more than 32 million residential and business broadband customers. Our residential and business customers rely on this network, which is vulnerable to acute physical risks, to deliver telecommunications services. The distributed nature of our network over a wide geographic area in the United States reduces the risk of any individual event having a significant impact on our business. However, an increase

in the frequency and severity of extreme weather events, such as storms, flooding and wildfires, may have a negative impact on our operations by damaging critical infrastructure that provides service to customers and degrading or disrupting our network and associated products and services.

Overall, we have invested more than \$20 billion over the last five years to help meet rapid changes in customer demand and keep our network and operations running as reliably and efficiently as possible. Part of this includes investing annually in back-up equipment such as generators, batteries and power supplies that enable our network to withstand electricity grid outages that may occur during extreme weather. We anticipate continuing to invest in hardening our critical infrastructure to improve network reliability and resiliency for our customers.

Example Climate-related Opportunities

The following is an example of a specific climate-related opportunity that may impact our business.

Energy and Resource Efficiency Opportunity: Doubling Our Network Efficiency

Comcast's domestic network provides products and services to more than 32 million residential and business broadband customers, as of the end of 2022. Powering this network and cooling critical equipment drives a significant portion of our electricity consumption and therefore our carbon footprint.

In order to support continued business growth and deliver products and services that meet customers' evolving expectations, we must increase capacity to support increasing consumer usage as well as extend the network to serve new geographies. These efforts require additional capital and operating expenses and increase our electricity consumption and our emissions footprint.

To more efficiently grow our network, for several years Comcast has been developing and deploying class-leading network digitization and virtualization technologies to make our network smarter, faster, and more reliable – creating the opportunity to improve the energy efficiency and reduce the direct capital and operating costs that would otherwise be incurred for network growth using traditional network technology. Enabled by this network transition, in 2022, Comcast announced plans to double our network energy efficiency by 2030, cutting the EPCB in half.

As we roll out network virtualization, we remove a significant number of analog physical components from the network and replace them with more efficient, smaller, higher capacity digital technologies, orchestrated by a fully virtualized platform. We use a new virtualized platform for our network headends and hubs that is a more efficient and flexible use of the hardware resources it runs on. This new virtualized platform can operate on commodity hardware, eliminating the need for proprietary hardware that took up more space, used more electricity, and was more costly. Altogether, this enables us to grow the capacity of the network at relatively lower electricity per byte, to serve more customers with higher bandwidth, more reliability, and more flexibility, while minimizing increases in electricity consumption, capital investment, facility space, and cooling requirements. The space savings and energy efficiency of the new solutions are more than 50% compared to the prior solutions.

The potential impact of this opportunity can be understood by estimating avoided costs to accommodate growth projections. A portion of the cost savings comes from the development of a new software solution that runs on commodity hardware, allowing us to avoid the cost of software

licenses used previously. Further cost savings comes from avoiding costs for new capital equipment and new physical space leases that would have been required. In addition to the financial opportunity, there will be a reduction of emissions intensity through this effort because of the space intensity savings and the increased power density serving more customers associated with the virtualized solution.

In order to realize this opportunity, in 2020, we began executing the network virtualization of our U.S. network with a targeted rollout plan aligned with our growth projections. Once fully deployed, the new virtualized platform will offer faster broadband speeds, greater reliability, and improved energy efficiency, reducing the relative operating cost to deliver our products and services.

Risk Management

Identification, Assessment, and Management of Climate-related Risks

Our annual ERM process is driven by the company's ERM steering committee, which is responsible for identifying those risks that are most impactful to the company and ensuring that mitigation strategies are identified and operationalized. Our ERM process assesses the characteristics and circumstances of the evolving business environment at the time and seeks to identify both the potential impacts to our company of a particular risk and the velocity with which the risk may manifest (e.g., rapidly in less than three months or more slowly in more than twelve months). The Comcast Audit Committee has oversight for the company's ERM process, and oversight for the resulting risks and mitigations is provided by the full Board of Directors. See *Board Oversight* above for more information.

Risk identification and mitigation is iterative. We also model and consider various assumptions for strategic investment as part of the company's LRP cycle each year. The LRP process occurs over several months annually to model, plan, and set budgets for our company over a 5-year (short-term and medium-term) horizon.

The combination of the ERM and LRP processes determine which mitigation activities for the company's most impactful risks are prioritized for short-term and medium-term funding. As mitigation strategies and opportunities are planned and funded as part of the LRP and budget processes, the results feed into the plans of the company's Internal Audit function, which independently validates progress in the general course of its audit work.

In addition, the outcomes of the LRP process are used across the company to identify risks and opportunities to inform the decarbonization of our business.

Integrated Risk Management

Within the company's ERM process, environmental risks are not stand-alone ERM risks given the overall nature of our business. Instead, environmental-related risks are reflected within some of the company's top risks.

For example, the company's business continuity risk includes crisis planning, preparedness/testing, and response across a variety of events, including weather events (e.g., hurricanes, floods, wildfires), natural disasters (e.g., earthquakes and tsunamis), pandemics, wide-spread power outages, supply chain disruption, and cyber-attacks. Business continuity and disaster recovery programs across the company are led by steering committees comprised of senior business, financial, and technological

leaders. These leaders seek to ensure that we continuously evaluate and test critical operations, technology, and facilities for incident response and recovery. Where relevant, the steering committees and crisis responders coordinate across the company to ensure appropriate responses for our customer and employee populations. Pursuant to its charter, the Comcast Audit Committee receives periodic reports on business continuity activities.

Because risk management is considered an integral part of company operations, environmental aspects of top ERM risks are managed by the same operational owners responsible for mitigating the specific ERM risks. This approach allows environmental issues to be considered alongside other operational factors when determining mitigation strategies and prioritization.

Metrics and Targets

Climate-related Metrics

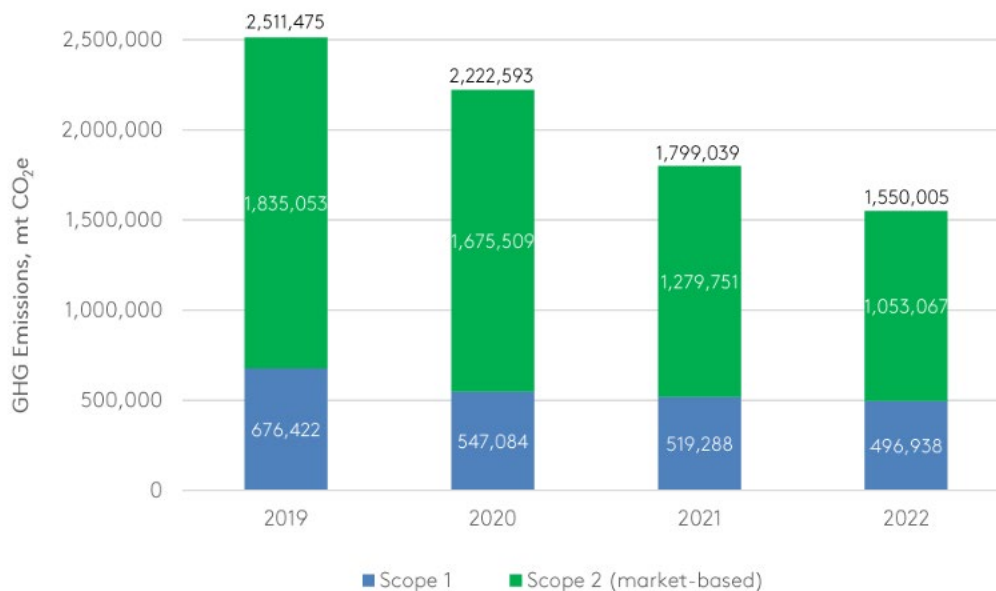
We measure a variety of climate-related metrics that inform our environmental sustainability and overall business strategies and allow us to track performance against our goals. A comprehensive account of our environmental metrics is disclosed annually in our [Carbon Footprint Data Report](#) and in our [CDP Climate Change response](#).

GHG Emissions: Scopes 1 and 2

We annually report our Scope 1 and 2 GHG emissions data, from a 2019 baseline year, calculated based on the WRI/WBSCD GHG Protocol and the WRI/WBSCD GHG Protocol Scope 2 Guidance – an amendment to the GHG Protocol Corporate Standard in alignment with the SASB framework. Scope 1 includes direct emissions from sources that we own or control. Scope 2 includes indirect emissions created in the generation of purchased electricity, steam, heating, and cooling consumed in our global operations.

In 2022, we reported Scope 1 and Scope 2 market-based GHG emissions of 1.55 million mtCO₂e, a reduction of 12% from 2021 and 38% from our 2019 baseline. We're proud of the progress we made in 2022 reducing our emissions while growing our business. The main drivers of this reduction were:

- sourcing more clean energy;
- the greening of the U.S. electricity grid; and
- improving operational efficiency in energy usage and vehicle fleet.



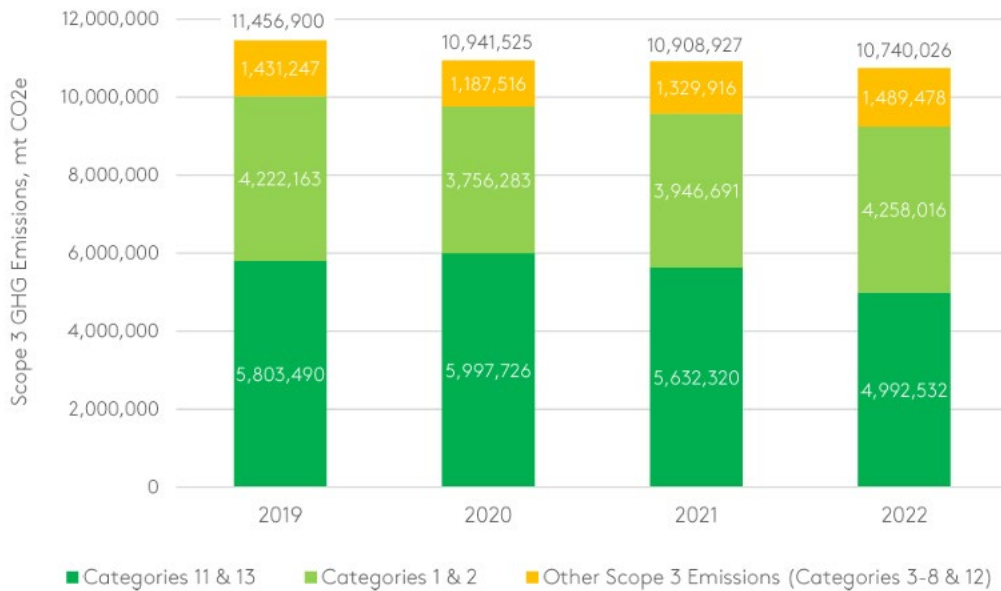
In 2022, 67% of our Scope 1 and Scope 2 (market-based) GHG emissions was from purchased electricity powering our global operations, including our facilities, HFC cable network and data centers, and theme parks. 20% of our Scope 1 and 2 emissions was from our owned and operated vehicle fleet. The remaining 13% came from generators, cooling systems, and purchased steam, cooling, and heating.

For more information on our Scope 1 and 2 emissions, see our [Carbon Footprint Data Report](#) and our annual [CDP Climate Change response](#).

GHG Emissions: Scope 3

We calculate our reported Scope 3 GHG emissions inventory based on the GHG Protocol Technical Guidance for Calculating Scope 3 Emissions. Scope 3 emissions represent an estimate of the GHG emissions produced in a company's upstream and downstream value chain. By definition, Scope 3 emissions occur from sources owned or controlled by entities outside of the company's control and, in certain cases, two or more companies may account for the same emissions within the GHG inventories they calculate. Given inherent data limitations and inconsistent estimation techniques employed among various companies, you are cautioned to not place any undue reliance on our estimated Scope 3 emissions.

From 2019 to 2022, Comcast's estimated Scope 3 GHG emissions, reported in metric tonnes of CO₂ equivalents (mtCO₂e), decreased by 6%, primarily driven by decreases in the energy needed at the customer premise to power the devices which deliver our services (Categories 11 and 13), slightly offset by increases in other Scope 3 categories.



Our largest sources of Scope 3 emissions are:

- Purchased goods and services (Category 1) and Capital goods (Category 2):** These emissions represent our estimate of the cradle-to-gate emissions associated with the goods, services and capital goods that we purchased in the calendar year. The majority of these emissions were estimated using a spend-based method, using either supplier-specific or industry average emission factors from the U.S. EPA. These emissions are the Scope 1, Scope 2, and upstream Scope 3 emissions from our tier 1 suppliers.
- Use of sold products (Category 11) and Downstream leased assets (Category 13):** These emissions are primarily estimates associated with the electricity used to power devices that we have sold or leased to customers, for instance the gateway modems and set-top boxes that enable our broadband and video entertainment services. This electricity is purchased, used, and controlled by our customers, at the customer premise. The majority of emissions in these categories are estimated using a product-specific method, using product volumes, average energy use per year, and purchased electricity emission factors based on the product's country location.

For more information on our Scope 3 emissions and calculation methodologies, see our [Carbon Footprint Data Report](#) and our annual [CDP Climate Change response](#).

Climate-related Commitments and Targets

In 2021, Comcast set a goal to be carbon neutral in our Scope 1 and 2 emissions by 2035. This goal has been integrated into our environmental sustainability strategy and internal plans, and we already are and will continue to work towards this goal, including by:

- investing in clean and renewable energy;
- reducing vehicle emissions by reducing truck rolls, piloting electric and hybrid vehicles, working with drivers to reduce idle time, and installing telematics and fuel efficiency technology; and
- developing solutions to achieve efficiency gains across multiple aspects of our business, from our facilities and theme parks to our network and data centers.

In 2022, Comcast announced a goal to double our network energy efficiency by 2030, cutting the EPCB of data in half. Comcast's multi-year nationwide network transformation to virtual, cloud-based technologies and decommissioning of less efficient network equipment will drive these long-term energy efficiency gains. Thus far, we have reduced the electricity it takes to deliver each byte of data across our network by 36% since 2019. We expect that, over time, our attention to sourcing renewable energy and honing efficiency across our global operations will bring us close to our climate-related goals. We will likely need to address any remaining emissions we cannot eliminate directly by purchasing carbon offsets.

While we are proud of our progress to date and the goals we have set to reduce our GHG emissions, there are myriad challenges that will need to be overcome to meet our carbon neutral goal and the decarbonization goals of society at large. These challenges include many significant factors beyond our control, including political, economic, regulatory, and geopolitical conditions, supply chain and labor issues, the evolution of carbon offset markets, and limited large-scale public- and private-sector investments and innovations in technology and infrastructure. For example, a widescale clean energy transition will require expanded policies and market mechanisms, enhanced grid resiliency, and greater energy innovation. In addition, most next-generation technologies beyond renewables are still too costly for large-scale deployment or are not yet available.

Looking ahead, we plan to submit our near-term science-based GHG emissions reduction targets for Scopes 1, 2, and 3 to the SBTi, in line with pathways designed to limit global warming.

For more information on our carbon neutral goal and progress, see our [Carbon Footprint Data Report](#), the [Environment](#) page of our website and our annual [Impact Report](#).