Comcast Corporation - Climate Change 2021

C0. Introduction

C0.1

(C0.1) Give a general description and introduction to your organization.

Comcast Corporation is a global media and technology company with three primary businesses: Comcast Cable, NBCUniversal and Sky. Comcast has developed, managed and operated cable systems since 1963. Through transactions in 2011 and 2013, we acquired NBCUniversal, and in 2018, we acquired Sky.

· Comcast Cable is a leading provider of broadband, video, voice, wireless, and security and automation services to residential customers in the United States, and it also provides these and other communications services to business customers and sells advertising.

· NBCUniversal is one of the world's leading media and entertainment companies that develops, produces and distributes entertainment, news and information, sports, and other content for global audiences, and owns and operates theme parks worldwide.

· Sky is one of Europe's leading entertainment companies, with a direct-to-consumer business that provides video, high-speed internet, voice and wireless phone services, and a content business that operates entertainment networks, the Sky News broadcast network and Sky Sports networks.

Our other business interests consist primarily of the operations of Comcast Spectacor, which owns the Philadelphia Flyers and the Wells Fargo Center arena in Philadelphia, Pennsylvania.

Unless otherwise specified, references to “Comcast, our company, we, us, and our” in the responses reflect information for Comcast Corporation and its consolidated subsidiaries. References to Comcast Cable, NBCUniversal and Sky refer to information that is applicable only to such business.

In addition, this report includes estimates, projections and statements relating to our business plans, objectives and expected operating results and statements regarding ESG-related plans and goals that are “forward looking statements” within the meaning of the Private Securities Litigation Reform Act of 1995 and Section 21E of the Securities Exchange Act of 1934. These forward-looking statements generally are identified by the words “believe,” “project,” “expect,” “anticipate,” “estimate,” “intend,” “potential,” “strategy,” “future,” “opportunity,” “commit,” “plan,” “may,” “should,” “could,” “will,” “would,” “will be,” “will continue,” “will likely result” and similar expressions. Forward-looking statements are based on current expectations and assumptions that are subject to risks and uncertainties that may cause actual results to differ materially. In evaluating these statements, you should consider various factors, including the risks and uncertainties we describe in the “Risk Factors” sections of our Forms 10-K and 10-Q and other reports we file with the Securities and Exchange Commission (“SEC”). 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 statements, whether because of new information, future events or otherwise.

Visit comcastcorporation.com for more information about our company .

C0.2

(C0.2) State the start and end date of the year for which you are reporting data.

	Start date	End date	Indicate if you are providing emissions data for past reporting years	Select the number of past reporting years you will be providing emissions data for
Reporting year	January 1 2020	December 31 2020	No	<Not Applicable>

C0.3

(C0.3) Select the countries/areas for which you will be supplying data.

Argentina
Australia
Austria
Belgium
Brazil
Canada
China
Colombia
Cuba
Denmark
Ecuador
Egypt
Finland
France
Georgia
Germany
Guatemala
Honduras
Hungary
India
Iran (Islamic Republic of)
Iraq
Ireland
Isle of Man
Israel
Italy
Japan
Malta
Mexico
Netherlands
New Zealand
Pakistan
Panama
Paraguay
Peru
Philippines
Portugal
Republic of Korea
Russian Federation
Singapore
South Africa
Spain
Sweden
Switzerland
Taiwan, Greater China

Thailand
Turkey
United Arab Emirates
United Kingdom of Great Britain and Northern Ireland
United States of America

C0.4

(C0.4) Select the currency used for all financial information disclosed throughout your response.

USD

C0.5

(C0.5) Select the option that describes the reporting boundary for which climate-related impacts on your business are being reported. Note that this option should align with your chosen approach for consolidating your GHG inventory.

Operational control

C1. Governance

C1.1

(C1.1) Is there board-level oversight of climate-related issues within your organization?

Yes

C1.1a

(C1.1a) Identify the position(s) (do not include any names) of the individual(s) on the board with responsibility for climate-related issues.

Position of individual(s)	Please explain

Position of individual(s)	Please explain
Board-level committee	While active risk management is primarily the responsibility of our management, our Board understands the significant risks facing our company, including those related to relevant ESG issues, and exercises, as a whole and through its committees, an appropriate degree of risk oversight. Our management, with involvement and input from our Board, performs a companywide enterprise risk management ("ERM") assessment to identify key risks and to manage and mitigate the significant strategic, operational and legal risk areas for our company. Our executive management team has the overall responsibility for, and oversight of, this process, and an ERM steering committee composed of legal, financial, accounting and business executives manages the process, with one or more senior business executives then monitoring and managing each of the identified risks. Regular business presentations and discussions throughout the year at the Board or its committees highlight significant relevant risks and exposures, including those listed below as core enterprise risks identified through our ERM process. 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 with respect to environmental matters: • The Governance and Directors Nominating Committee, as noted in its charter, periodically reviews and assesses the Company's annual Impact Report and the Company's significant environmental and social (E&S) issues, risks and trends, including those relating to climate issues. • The Audit Committee, as noted in its charter, reviews the Company's policies, practices and assessments with respect to significant financial risks and significant business risks relating to cybersecurity and business continuity (such as those risks arising from severe weather events), including discussing with management such risk exposures and steps taken to monitor and manage such exposures. The Board oversees risks associated with the Company's reputation, which may include the Company's climate-related activities.

C1.1b

(C1.1b) Provide further details on the board's oversight of climate-related issues.

Frequency with which climate-related issues are a scheduled agenda item	Governance mechanisms into which climate-related issues are integrated	Scope of board-level oversight	Please explain
Scheduled – some meetings	Reviewing and guiding major plans of action	<Not Applicable>	As noted earlier, 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 with respect to environmental matters: • The Governance and Directors Nominating Committee, as noted in its charter, periodically reviews and assesses the Company's annual Impact Report and the Company's significant environmental and social (E&S) issues, risks and trends, including those related to climate issues. • The Audit Committee, as noted in its charter, reviews the Company's policies, practices and assessments with respect to significant financial risks and significant business risks relating to cybersecurity and business continuity (such as those risks arising from severe weather events), including discussing with management such risk exposures and steps taken to monitor and manage such exposures. • The Board oversees risks associated with the Company's reputation, which may include the Company's climate-related activities.

C1.2

(C1.2) Provide the highest management-level position(s) or committee(s) with responsibility for climate-related issues.

Name of the position(s) and/or committee(s)	Reporting line	Responsibility	Coverage of responsibility	Frequency of reporting to the board on climate-related issues
Sustainability committee	<Not Applicable>	Both assessing and managing climate-related risks and opportunities	<Not Applicable>	Annually

C1.2a

(C1.2a) Describe where in the organizational structure this/these position(s) and/or committees lie, what their associated responsibilities are, and how climate-related issues are monitored (do not include the names of individuals).

The Environmental Executive Task Force (EETF) is chaired by Comcast's Chief Financial Officer (CFO), Chief Legal Officer (CLO), and Chief Administrative Officer and meets periodically to assess and manage climate-related risks and opportunities. Other members of the task force include executives from each business (Comcast Cable, NBCUniversal, and Sky) and across multiple functions including procurement, strategy, finance, accounting, and other operational functions. The EETF was formed primarily to better define and operationalize strategies across our businesses to address climate-related risks, realizing climate-related opportunities, and determining methods to finance these activities.

C1.3

(C1.3) Do you provide incentives for the management of climate-related issues, including the attainment of targets?

	Provide incentives for the management of climate-related issues	Comment

	Provide incentives for the management of climate-related issues	Comment
Row 1	Yes	Incentives that apply to a large population of the Company include a portion of the annual cash bonus being dedicated to the Company's stakeholder and sustainability initiatives. Also, individual incentives are provided to certain employees in environmental sustainability-related functions.

C1.3a

(C1.3a) Provide further details on the incentives provided for the management of climate-related issues (do not include the names of individuals).

Entitled to incentive	Type of incentive	Activity inventivized	Comment
Other, please specify (Facility managers)	Monetary reward	Behavior change related indicator	For staff members who have energy efficiency objectives as part of their personal objectives, achievement of those goals is reflected in each employee's overall compensation.
All employees	Monetary reward	Behavior change related indicator	For all employees who receive annual cash bonuses (approx. 20,000), including the Company's named executive officers for SEC reporting purposes, 15% is dedicated to stakeholder and sustainability initiatives, which include environmental initiatives.

C2. Risks and opportunities

C2.1

(C2.1) Does your organization have a process for identifying, assessing, and responding to climate-related risks and opportunities?

Yes

C2.1a

(C2.1a) How does your organization define short-, medium- and long-term time horizons?

	From (years)	To (years)	Comment
Short-term	0	5	
Medium-term	5	10	
Long-term	10	30	

C2.1b

(C2.1b) How does your organization define substantive financial or strategic impact on your business?

Through our annual Enterprise Risk Management assessment process, senior leaders evaluate the likelihood and impact of possible climate-related risks, such as severe weather events and their impact on our revenue, operations and business continuity, and other financial planning impacts. This process contextualizes substantive financial impact at our consolidated enterprise level. Responses to this CDP questionnaire include items that we would not consider material for purposes of U.S. securities laws or otherwise have a meaningful financial impact to our company or its operations.

C2.2

(C2.2) Describe your process(es) for identifying, assessing and responding to climate-related risks and opportunities.

Value chain stage(s) covered
Direct operations
Upstream
Downstream

Risk management process
Integrated into multi-disciplinary company-wide risk management process

Frequency of assessment
More than once a year

Time horizon(s) covered
Short-term
Medium-term
Long-term

Description of process

Climate related risks are assessed as part of the Company's Enterprise Risk Management and Long-Range Planning processes. The Enterprise Risk Management process is driven by the Company's ERM Committee, comprised of executive leadership across Comcast's businesses (Cable, NBCUniversal and Sky) and co-chaired by the Chief Financial Officer and Chief Legal Officer. This Committee is responsible for identifying those risks that are most impactful to the Company and ensuring that mitigation strategies are identified and operationalized. 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. Risk identification and mitigation is iterative, including the scenarios that are modeled and considered for strategic investment as part of the Company's Long-Range Planning cycle. (The LRP process occurs over several months annually, and is used to model, plan and budget all aspects of the company in detail over a 5+ year horizon.) The combination of the ERM and LRP processes determine which mitigation activities for the Company's most impactful long-term risks are prioritized for short-term (5+ year) funding. As mitigation strategies are planned and funded as part of the LRP and budget process, the results feed into the plans of the Company's Internal Audit function, who independently validates progress in the general course of its audit work. Within the Company's ERM process, climate risks are not stand-alone ERM risks. Instead, climate related risks are integrated within many of the Company's most impactful risks. For example, the Company's Business Continuity Risk includes crisis planning, preparedness/testing and response across a variety of events including, but not limited to, weather events (hurricanes, floods, wildfires), natural disasters (earthquakes and tsunamis), pandemics, wide-spread power outages, supply chain disruption and cyber-attacks. Because risk management is considered an integral part of Company operations, the climate aspects of our risks are managed by the same operational owners responsible for mitigating our ERM risks. This approach allows climate to be considered alongside other operational factors when determining mitigation strategies and prioritization. Case study for Acute Physical Risk : Due to the direct impact to our customers from network outages or disruption, especially during weather events or other national crises when our customers need access to information the most, Comcast Cable business risks include reliable network availability. As such, we have invested over $15B since the beginning of 2017 to ensure our network and operations are running as reliably and efficiently as possible, and able to meet rapid changes in customer demand. In addition to ensuring that we forecast and invest in capacity years into the future, Comcast Cable continues to reduce the energy consumption associated with network usage through innovation with software, AI, and other virtual and physical critical infrastructure. In addition, Comcast Cable continues to collaborate industry wide through SCTE's Energy Management Program (SCTE 2020) in creating standards, implementing measures and executing energy efficiency projects that result in favorable improvements in energy to bandwidth measures. In March and April 2020 with COVID related stay-at-home orders going into effect across the US, Comcast Cable experienced a 30%+ increase in upstream traffic vs. 2019, with traffic remaining well above pre-COVID usage for the duration of the year. However, energy consumption remained relatively flat YoY due to the ongoing improvements Comcast Cable network engineering functions are making around overall energy efficiency and the transition to virtual operations. Case study for Transition Risk: Because consumer video preferences have been shifting in recent years towards video streaming services, our Sky business risks

include ensuring that streaming content (both acquired and original production) meets consumer expectations and demands. Streaming is not a topic for which emissions implications are widely modeled or understood. To better understand and mitigate risks associated with streaming energy usage and emissions, Sky collaborated with other innovative media companies and the University of Bristol in a multi-year project called “DIMPACT”. This project developed a tool that provides assessment modules for the GHG emissions of digital publishing, advertising services, business intelligence and video streaming. While this model is still new (published in June 2021), it provides a reasonable baseline to estimate the emissions associate with streaming Sky services so that Sky can determine potential measures to offset usage as part of Sky’s Net Zero 2030 commitment. In addition, Sky recently released new Sustainable Production Guidelines to help future productions achieve albert sustainable production certification.

C2.2a

(C2.2a) Which risk types are considered in your organization's climate-related risk assessments?

	Relevance & inclusion	Please explain
Current regulation	Relevant, always included	We consider relevant regulations based on operational realities such as industry opportunities and challenges, technological advancements, potential reputational impacts, severe weather, energy issues, and policy considerations year-round as they arise. We have a government affairs team that tracks relevant regulation that is proposed and/or is adopted. For example, the California Public Utilities Commission adopted a measure that will require 72 hours of network backup power for emergency situations such as electricity shutoffs. Comcast Cable is evaluating and tracking the potential risks and financial implications of this new regulation.
Emerging regulation	Relevant, always included	We consider relevant regulations based on operational realities such as industry opportunities and challenges, technological advancements, potential reputational impacts, severe weather, energy issues, and policy considerations year-round as they arise. We have a government affairs team that tracks relevant existing regulation and helps us consider ongoing options for compliance and opportunities. For example, we monitor the potential for state regulations, such as the California Public Utilities Commission regulation, to be mimicked or adopted by other states, which could broaden our risk and compliance obligations.
Technology	Relevant, sometimes included	Comcast operates its business in numerous geographies around the world and is dependent on the existing energy infrastructure in those markets to support its operations. This reliance exposes us to several technology-related risks. For example, as we transition our energy portfolio to rely more heavily on renewable energy technology, that technology must A) be available in the quantities we require, and B) be dependable enough to support our significant load in order for us to achieve our climate-related aspirations. Reliability of energy technology will be of particular importance given the anticipated rise in temperature variability and the impact that extreme temperatures may have on our operations.
Legal	Relevant, always included	Our legal team monitors potential risks related to all aspects of our business, including government regulation and litigation, including any that may arise related to climate. For example, we monitor current and emerging climate-related regulations so that we can respond appropriately and minimize any risk of non-compliance.

	Relevance & inclusion	Please explain
Market	Relevant, sometimes included	Since Comcast is in the information and communication technology field, there may be both risks and opportunities around energy efficiency for our products and devices. We strive for the continuous improvement of energy efficient equipment in an effort to anticipate shifting consumer preferences. For example, Comcast Cable has been a leading member of a voluntary agreement (VA) that was established in 2012 to improve energy efficiency of set-top boxes (STBs). The VA has now been extended to 2025, and many of its STBs are already compliant with the highest standard, driving energy consumption down, and customer savings up. Comcast Cable estimates that customers in 2020 saved more than 4.3 TWh of energy (~3 million metric tons of CO2E) and $569 million due to improvements in energy efficiency of its STBs, and nearly $2.5 billion and 19 TWh of energy (~13.4 million metric tons CO2E) since the agreement began. In addition to improving STBs, Comcast Cable has also innovated through a separate voluntary agreement to improve energy efficiency in small network equipment (SNE), including broadband modems, integrated access devices, and local network equipment. Additionally, Comcast has recently collaborated with the Energy Advocates to establish the Tier 4 energy efficiency levels of the Set Top Box VA. As we continue our ongoing partnership with the VA, we strive for the continuous improvement of energy efficient equipment in an effort to anticipate shifting consumer preferences.
Reputation	Relevant, sometimes included	We closely monitor risks to our brand and reputation. For example, we could have unfavorable customer perception due to any of the following factors: lack of action around climate or energy, inadequate speed of action around climate or energy, actions taken that could be seen as counter-productive to a low-carbon agenda.
Acute physical	Relevant, always included	Acute-physical impacts, such as extreme weather events, can cause disruption to our cable distribution network or broadcasting infrastructure and network and may result in reduced or lost services for our customers. As a media and technology company, production and broadcasting are important parts of our service offerings , and disruption poses a risk on our operational capabilities and reliability to our customers. For example, our network team monitors sites vulnerable to floods and other environmental risks assessed with the National Risk Index and tracks costs to address the risk, such as costs to repair storm-damaged plants or ongoing insurance costs.
Chronic physical	Relevant, always included	Chronic-physical impacts may be considered based on operational realities such as industry opportunities and challenges, technological advancements, potential reputational impacts, severe weather, energy issues, and policy considerations year-round as they arise. For example, analysis of global temperature increases has resulted in forecasting higher cooling bills and costs of energy (such as HVAC use) required to cool data centers and buildings required to run operations. We believe that chronic physical risk is likely to have a limited impact due to the nature of our business, where risks in the short term, which would lead to long term impact, would have been addressed as they occur. For example, as California has historically seen an increase in severe weather events, such as drought and fires due to global temperature increases, underground plants and standby power are required to power the local network in case local power companies turn off power.

C2.3

(C2.3) Have you identified any inherent climate-related risks with the potential to have a substantive financial or strategic impact on your business?

Yes

C2.3a

(C2.3a) Provide details of risks identified with the potential to have a substantive financial or strategic impact on your business.

Identifier
Risk 1

Where in the value chain does the risk driver occur?
Direct operations

Risk type & Primary climate-related risk driver

Current regulation	Mandates on and regulation of existing products and services

Primary potential financial impact
Increased capital expenditures

Climate risk type mapped to traditional financial services industry risk classification
<Not Applicable>

Company-specific description
Communications services depend on a network of equipment that may be affected by severe weather events, such as fires, floods and storms, which are occurring with increasing frequency. Because of extreme fire danger and a vulnerable electric grid, California regulators have authorized electric utilities to proactively shut off power to entire communities for extended periods as a precaution against power lines igniting wildfires. These proactive power shutoffs, referred to as public safety power shutoffs (PSPS) events, occur during the wildfire season, can last for days at a time, and can cover large areas. As wireline communications networks rely on commercial power, these power outages have been disruptive to California communications consumers. To address this issue, California regulators adopted a decision requiring wireline communications providers to have 72 hours of backup power for facilities in certain fire-prone areas of the state, with deadlines for implementation in two waves in October 2021 and August 2022. Therefore, the risk to Comcast is non-compliance with the requirements set forth by California regulators. Comcast Cable serves over 500,000 customer relationships in each of the San Francisco and Sacramento designated market areas and between 250,000 – 500,000 customer relationships in the Fresno designated market area with broadband and video services. To support these customers and their products / services, Comcast Cable has numerous power sources distributed throughout its network that support facilities in fire-prone areas of California. . These power sources rely on commercial power, and therefore will require backup power to maintain service during PSPS events. Comcast Cable has explored a variety of backup power options that it can deploy where adequate space is available, and deployment is safe for our workers and surrounding communities. Comcast Cable has already taken substantial steps to provide backup power to the facilities in these fire-prone areas and expects to meet the implementation deadlines set by California regulators.

Time horizon
Short-term

Likelihood
Very likely

Magnitude of impact
Low

Are you able to provide a potential financial impact figure?
Yes, a single figure estimate

Potential financial impact figure (currency)
0

Potential financial impact figure – minimum (currency)
<Not Applicable>

Potential financial impact figure – maximum (currency)
<Not Applicable>

Explanation of financial impact figure
Although the California Public Utility Commission (CPUC) has the authority to fine companies that are not in compliance with its decisions, Comcast is well underway in executing towards the CPUC's 2021 and 2022 backup power deadlines and expects to meet the requirements of the regulation. Therefore, we estimate the potential financial impact of this risk to be $0.

Cost of response to risk
0

Description of response and explanation of cost calculation
The cost to respond to the risk is the cost to comply with the CPUC's new regulation. For example, this includes the purchase of the backup-power equipment, as well as the costs incurred to deploy and maintain the portable backup power supplies. This information is confidential; therefore, we have reported 0 as the cost to respond. However, we have estimated this figure for internal purposes.

Comment

Identifier
Risk 2

Where in the value chain does the risk driver occur?
Direct operations

Risk type & Primary climate-related risk driver

Acute physical	Increased severity and frequency of extreme weather events such as cyclones and floods

Primary potential financial impact

Increased capital expenditures

Climate risk type mapped to traditional financial services industry risk classification
<Not Applicable>

Company-specific description
Comcast Cable's cable network covers over 59.7 million homes and businesses throughout the United States (as of the end of 2020) and is comprised of about 750,000 miles of fiber and coax cable. The telecommunications services provided to our residential and business customers depend on this network of equipment that is vulnerable to both transition and physical risks. An increase in frequency and severity of extreme weather events, such as storms, may have a negative impact on our operations by impacting critical infrastructure that provides service to customers This could lead to increased capital or operating costs for 1) repairing any damage, 2) proactively hardening the network to withstand future disruptions.

Time horizon
Short-term

Likelihood
Likely

Magnitude of impact
Medium

Are you able to provide a potential financial impact figure?
Yes, a single figure estimate

Potential financial impact figure (currency)
0

Potential financial impact figure – minimum (currency)
<Not Applicable>

Potential financial impact figure – maximum (currency)
<Not Applicable>

Explanation of financial impact figure
Comcast tracks the capital costs and operating expenses incurred due to extreme weather events (e.g., flooding, fires). Examples of these costs and expenses include temporary backup power to affected facilities to repair or maintain services, facilities repair costs when physical damage occurs, equipment repair or replacement in the case of damage, plant repairs required on our network of 750,000 miles of fiber and coax, and the labor cost associated with these various types of repairs. To estimate the financial impact of extreme weather in the short-term (0-5 years), we anticipate at least as many extreme weather events as in the past, and therefore we estimate our potential cost impact from storm-related damages as be a multi-year projection based on historical results. This information is confidential; therefore, we have reported 0 as the financial impact. However, we have estimated this figure for internal purposes.

Cost of response to risk
0

Description of response and explanation of cost calculation
In order to increase the reliability of our network and services through extreme weather events, Comcast invests annually in back-up equipment such as generators, batteries, and power supplies that enable the network to withstand electricity grid outages that may occur during extreme weather. We anticipate continuing to invest in hardening our critical infrastructure as climate change increases the risk of extreme weather events. This size of this investment is confidential; therefore, we have reported 0 as the cost to respond. However, we have estimated this figure for internal purposes.

Comment

Identifier
Risk 3

Where in the value chain does the risk driver occur?
Direct operations

Risk type & Primary climate-related risk driver

Emerging regulation	Carbon pricing mechanisms

Primary potential financial impact
Increased indirect (operating) costs

Climate risk type mapped to traditional financial services industry risk classification
<Not Applicable>

Company-specific description
An increase in the price of GHG emissions, such as through a fuel or carbon tax, a cap-and-trade system, or other pricing mechanism, may increase the cost of fossil fuel-based energy. Currently, Comcast relies in part on fossil fuel-based energy to power our network, theme parks, and buildings, as well as our vehicle fleets. (In 2020, 75% of our total Scope 1+2 emissions were from purchased electricity, with ~90% of that load in the United States, and 16% of our total Scope 1+2 emissions were from mobile combustion). We are working to increase the amount of renewable electricity used in our global operations, and from 2019 to 2020 increased our use of renewable electricity by 73% from 146,824 MWh to 254,858 MWh, with more renewable projects contracted and in our pipeline. However, we will continue to rely on the grid and non-renewable sources of energy to run parts of our business for many years. Therefore, any policies which increase the price of GHG emissions and/or the cost of fossil fuel-based energy or power has the potential to increase our operating costs.

Time horizon
Long-term

Likelihood
More likely than not

Magnitude of impact
Low

Are you able to provide a potential financial impact figure?
Yes, an estimated range

Potential financial impact figure (currency)
<Not Applicable>

Potential financial impact figure – minimum (currency)
8400000

Potential financial impact figure – maximum (currency)
9600000

Explanation of financial impact figure
It is difficult to estimate the exact cost impact from potential GHG pricing policies that may arise in the United States. In 2020, our global Scope 2 market-based emissions were 1,675,509 metric tons of CO2e, with approximately 90% in the United States. If we use the most recent Regional Greenhouse Gas Initiative's auction allowance price of $7.97 per ton of CO2 from June 2021, we estimate that annual operating costs could increase by $13 million if that allowance price were to apply globally. (1,675,509MT CO2e * ~90% US load * $7.97/ton = $12.0 million). However, a portion of our purchased electricity is already subject to RGGI allowance prices (estimated at 20-30%) and therefore would not incur a duplicated charge; hence an estimate of $8-10M corresponding to purchased electricity not currently subject to RGGI.

Cost of response to risk
30000000

Description of response and explanation of cost calculation
We are working to increase the amount of renewables electricity used in our global operations, and from 2019 to 2020 increased our use of renewable electricity by 73% from 146,824 MWh to 254,858 MWh, with more renewable projects contracted and in our pipeline. As a specific example, in Houston, Comcast recently committed to purchasing 100% renewable energy for our Cable facilities and network operations. In partnership with TXU Energy, more than 50 facilities and 11,000 power supplies throughout the area will be powered by renewable energy from the Foard City Wind Farm through 2031. In a single year, the renewable energy generated through this agreement is estimated to be equivalent to 70,000 metric tons of C02e. The TXU Energy transaction covers nearly all of Comcast's Houston region electricity footprint and the remainder is being covered by renewable energy certificates. As we increase the percent of electricity that comes from renewables (from our current 2020 level of 5.7% globally), we will reduce the risk of cost increase due to carbon pricing mechanisms. The exact price of renewable energy contracts is difficult to estimate, with projects ranging from 10% premiums over grid electricity to projects that would be lower cost than grid electricity. If we estimate the MWh cost of electricity at $115/MWh and a premium of 4-9% to source renewable energy, and using the 2020 global grid electricity usage of 4,740,096 MWh with ~90% in the US, we estimate a total incremental cost of $20-40M to source renewable electricity for our US operations (presuming such supplies were available).

Comment

C2.4

(C2.4) Have you identified any climate-related opportunities with the potential to have a substantive financial or strategic impact on your business?

Yes

C2.4a

(C2.4a) Provide details of opportunities identified with the potential to have a substantive financial or strategic impact on your business.

Identifier

Opp1

Where in the value chain does the opportunity occur?

Direct operations

Opportunity type

Resource efficiency

Primary climate-related opportunity driver

Other, please specify (Use of new technologies)

Primary potential financial impact

Reduced direct costs

Company-specific description

Comcast Cable's fiber optic/coax network in the United States provided services to more than 33 million residential and business customers at the end of 2020. Powering this network and cooling the critical network equipment drives a significant portion of our electricity consumption and therefore our enterprise carbon footprint. In order to support continued business growth, we must grow our network. Using traditional technology, this would in turn expand our physical footprint, our electricity consumption and our emissions footprint. This network expansion will also incur capital and operating costs. For several years, Comcast Cable has been investigating and investing in network virtualization as an opportunity to improve network efficiency - enabling us to grow the capacity of the network to offer more customers high bandwidth, more reliability and more flexibility, while minimizing increases in electricity consumption, capital investment, facility space, and cooling requirements. Specifically, we have developed software for our network headends and hubs that is more efficient and more flexible than the proprietary software historically

used. This new software can operate on commodity hardware, eliminating the need for proprietary hardware that required more space, consumed more electricity, and was more costly. The space savings and energy efficiency of the new software and hardware solutions is more than 50% compared to the current solutions. We have had, and continue to have, a multiyear plan to virtualize our US network aligned with our growth projections. This results in a more efficient and more flexible network able to serve a growing customer base with increasing performance and experience demands, while increasing growth capacity and associated electricity consumption, facility space, and cooling requirements that would have otherwise been necessary.

Time horizon
Medium-term

Likelihood
Very likely

Magnitude of impact
Medium-high

Are you able to provide a potential financial impact figure?
Yes, a single figure estimate

Potential financial impact figure (currency)
0

Potential financial impact figure – minimum (currency)
<Not Applicable>

Potential financial impact figure – maximum (currency)
<Not Applicable>

Explanation of financial impact figure
The estimated financial impact of this opportunity is confidential; therefore, we have reported 0 as the financial impact. However, we have estimated this figure for internal purposes. More specifically, we assess the potential impact of this opportunity by estimating the avoided costs of expanding our network to accommodate growth projections over the next five years. About half of the savings comes from avoided software licenses that would have been required if we had not developed our own software solution. The other half comes from avoiding costs for new capital equipment and new physical space leases that would have been required. The range of the estimate is based on uncertainty of exactly what equipment would have been required in that buildout. In addition to the financial opportunity, because of the ~50% space intensity savings and the increased power density serving more customers associated with the virtualized solution, there will be a reduction of emissions intensity through this effort

Cost to realize opportunity
0

Strategy to realize opportunity and explanation of cost calculation

We understand that connectivity is at the center of our customer's lives. That's why for years, Comcast Cable has made strategic investments in our network. Network virtualization is a key pillar of our current strategy because it enables growth to more customers, improves the customer experience, lowers capital and operating costs, and reduces network intensity in electricity consumption, cooling, and space usage which will correspondingly reduce our network emissions intensity - a win for everyone. In order to realize this opportunity, we plan to execute the network virtualization of our US network during the next few years with a targeted rollout plan aligned with our growth projections. We began this rollout in 2020. The cost to realize this opportunity includes the capital cost to procure new commodity hardware as well as the investment in software development for our own software solutions. The size of this investment is confidential; therefore, we have reported 0 as the cost to realize. However, we have estimated this figure for internal purposes

Comment

Identifier
Opp2

Where in the value chain does the opportunity occur?
Direct operations

Opportunity type
Resource efficiency

Primary climate-related opportunity driver
Other, please specify (Use of new technologies)

Primary potential financial impact
Reduced indirect (operating) costs

Company-specific description
Comcast Cable's network in the United States provides services to more than 33 million residential and business customers at end of 2020. We have more than 1000 critical network facilities to operate our services. Cooling the critical network equipment to service our customers contributes to our enterprise carbon footprint. Comcast has been researching and testing ways to improve energy efficiency through HVAC optimization across our sites. Overrunning our HVAC systems creates inefficiency in both energy and dollars and correspondingly increases emissions. It also reduces the capacity of the air conditioning equipment. Utilizing blanking panels can reduce airflow mixing, set point adjustments can reduce mechanical cooling run time, and HVAC economizers maximize use of free cooling. Incorporating these three strategies, amongst others, presents an opportunity to improve energy and cost efficiency by up to and over 15% in some cases and reduce emissions intensity.

Time horizon
Short-term

Likelihood

Likely

Magnitude of impact
Low

Are you able to provide a potential financial impact figure?
Yes, a single figure estimate

Potential financial impact figure (currency)
0

Potential financial impact figure – minimum (currency)
<Not Applicable>

Potential financial impact figure – maximum (currency)
<Not Applicable>

Explanation of financial impact figure
In 2018 and 2019, we piloted HVAC optimization strategies at over 20 critical infrastructure sites. In these pilots, we tracked the resulting savings from the energy conservation methods instituted. The potential financial impact figure is based on the results of the pilot times the number of critical network sites at which we believe the opportunity could be realized. These numbers are confidential; therefore, we have reported 0 as the potential financial impact. However, we have estimated this figure for internal purposes.

Cost to realize opportunity
0

Strategy to realize opportunity and explanation of cost calculation
We seek to improve our energy efficiency across our network facilities and reduce our emission intensity. Optimizing our HVAC systems presents an opportunity to improve energy and cost efficiency by over 15% in many cases, as well as reduce emissions intensity. Some of the cost savings are a result of behavioral changes and require no incremental investment, while other cost savings require the purchase of additional equipment. Examples of equipment to aid in HVAC optimization include blanking panels, new thermostats and controls, and economizers. Our optimization methods were piloted at over 20 sites in 2018 and 2019. The total cost to realize this opportunity is based on the results of the pilot, and the cost of expanding the strategy across our critical network sites. The size of this investment is confidential; therefore, we have reported 0 as the cost to realize. However, we have estimated this figure for internal purposes.

Comment

Identifier
Opp3

Where in the value chain does the opportunity occur?
Direct operations

Opportunity type
Products and services

Primary climate-related opportunity driver
Other, please specify (Use of more efficient production and distribution processes)

Primary potential financial impact
Reduced indirect (operating) costs

Company-specific description
Comcast Cable provides services to more than 33 million residential and business customers (as of end of 2020). For new customers, self-installation has become a popular, easy, and convenient way to connect their new in-home services, rather than having a technician come set-up services in person. Self-installation has been particularly valuable during the pandemic in 2020 in order to limit contact for our customers and our technicians. Besides the customer convenience associated with self-installation, this process has lower costs for Comcast Cable and is better for the environment because it reduces our emissions footprint. Specifically, when customers opt for self-installation, a technician is not required to drive a Comcast vehicle to the customer's home. Instead, the customer may pick-up the equipment in a local store, or have the equipment shipped to them in significantly reduced packaging composed primarily of recyclable materials. While direct mail delivery or customer pick-up also incur some transportation emissions, the multi-purpose nature of those trips/services is expected to be lower than the dedicated trip by a technician to a customer's home, leading to lower net emissions impact. Comcast Cable continues to offer and promote self-installation to new customers and expects to see the adoption percentage continue to increase, creating a triple-win situation for the customers, Comcast, and the environment.

Time horizon
Short-term

Likelihood
Likely

Magnitude of impact
Medium-high

Are you able to provide a potential financial impact figure?
Yes, a single figure estimate

Potential financial impact figure (currency)
0

Potential financial impact figure – minimum (currency)
<Not Applicable>

Potential financial impact figure – maximum (currency)
<Not Applicable>

Explanation of financial impact figure

Comcast Cable has identified residential self-install kits as a more convenient, cost effective, and environmentally sustainable alternative to professional tech installs. Because of the environmental and cost savings associated with customers who opt to self-install, we continue to promote this option to all eligible customers and expect the opt-in rate to continue to rise for several more years. We estimate the potential financial impact of this opportunity based on our projections of the self-install opt-in rate (over time) times the projected number of customers with new service eligible for self-install (over time). We track these results regularly in order to develop our future projections for our annual budget and long-range planning process (0-5 years). The resulting size of this opportunity is confidential; therefore, we have reported 0 as the potential financial impact. However, we have estimated this figure for internal purposes.

Cost to realize opportunity

0

Strategy to realize opportunity and explanation of cost calculation

Self-installation kits (SIKs) provide a simplified way for customers to activate various residential products, and also help Comcast to make strides in reducing its environmental footprint. Over the last few years, SIKs have become the most common way for consumers to connect their in-home services. We plan to continue promoting SIKs to all eligible customers during the onboarding process, answering FAQs, and providing virtual tech help if needed during the process. The cost to realize this opportunity includes the logistics cost of packaging and shipping for those customers who opt for direct-ship of the self-install kit, plus the logistics cost of packaging and retail management for those customers who chose to pick-up their self-install kits at a local store. The resulting cost to realize this opportunity is confidential; therefore, we have reported 0 as the cost to realize. However, we have estimated this figure for internal purposes.

Comment

C3. Business Strategy

C3.1

(C3.1) Have climate-related risks and opportunities influenced your organization's strategy and/or financial planning?

Yes

C3.1b

(C3.1b) Does your organization intend to publish a low-carbon transition plan in the next two years?

	Intention to publish a low-carbon transition plan	Intention to include the transition plan as a scheduled resolution item at Annual General Meetings (AGMs)	Comment
Row 1	Yes, in the next two years	No, we do not intend to include it as a scheduled AGM resolution item	Sky has published a low-carbon transition plan called Sky Zero. This initiative is to achieve a net zero carbon target by 2030 that is in line with the Paris agreement of 1.5C. Sky also has a science-based target approved for Scope 1, 2 and 3.

C3.2

(C3.2) Does your organization use climate-related scenario analysis to inform its strategy?

No, but we anticipate using qualitative and/or quantitative analysis in the next two years

C3.2b

(C3.2b) Why does your organization not use climate-related scenario analysis to inform its strategy?

As noted prior, various climate-related risks are components of several of the Company's enterprise risks (such as severe weather events impacting business continuity risk). As such, climate-related risks are managed by the operational owners of those risks so that mitigation is considered within the broader risk mitigation plan. At this time, Comcast has not identified climate-related risk as a stand-alone risk for the enterprise fully independent of operations, and therefore, has not performed a stand-alone qualitative or quantitative climate-related scenario analysis at this time. However, we recognize the increasing importance of climate and plan to perform a climate-related scenario analysis within the next two years that will include a qualitative and/or quantitative component.

C3.3

(C3.3) Describe where and how climate-related risks and opportunities have influenced your strategy.

	Have climate-related risks and opportunities influenced your strategy in this area?	Description of influence
Products and services	Yes	Many of Comcast's products and services rely on power supplies and electrical infrastructure that contribute to our scope 3 emissions and may be susceptible to climate-related risks. Therefore, when considering the development of energy-consuming hardware for our cable and broadband services, producing entertainment, or building infrastructure to provide products and services to our customers, climate-related risks and opportunities have a significant influence on strategy in order to ensure resiliency and customer experience as well as reduce costs for our business and our customers. These influence our product and services strategy over the short and medium-term time horizons. Case study: Comcast Cable has been a leading member of a voluntary agreement (VA) that was established in 2012 to improve energy efficiency of set-top boxes (STBs). The VA has now been extended to 2025, and many of its STBs are already compliant with the highest standard, driving energy consumption down, and customer savings up. Comcast Cable estimates that customers in 2020 saved more than 4.3 TWh of energy (~3 million metric tons of CO2E) and $569 million due to improvements in energy efficiency of its STBs, and nearly $2.5 billion and 19 TWh of energy (~13.4 million metric tons CO2E) since the agreement began. In addition to improving STBs, Comcast Cable has also innovated through a separate voluntary agreement to improve energy efficiency in small network equipment (SNE), including broadband modems, integrated access devices, and local network equipment. Additionally, Comcast has recently collaborated with the Energy Advocates to establish the Tier 4 energy efficiency levels of the Set Top Box VA. As we continue our ongoing partnership with the VA, we strive for the continuous improvement of energy efficient equipment.
Supply chain and/or value chain	Yes	Our supply chain is exposed to the risks of climate change which, if left unmanaged, could increase the costs of providing our products and services to our customers. We therefore are seeking to limit our risk exposure through a more sustainable value chain. Case study: with increasing climate-related risks such as fires, floods, and droughts that could impact our network and customers, Comcast Cable closely tracks potential extreme weather events and drives mitigation plans to build resiliency into our supply chain in partnership with our key vendors. Our strategy focuses on three core tenets: designing best-in-class products (e.g. ruggedized outdoor equipment), building appropriate redundancies into our supplier base (e.g. multiple component and manufacturing sources, contractual protections, etc.), and diversifying our warehouse and factory locations across North America and Asia. The time horizon for our approach is focused on long-term risk mitigation, backed by short- and medium-term actions. In addition, Comcast recently launched its Code of Conduct for Suppliers and Business Partners, which includes key provisions around business continuity and sustainable practices.

	Have climate-related risks and opportunities influenced your strategy in this area?	Description of influence
Investment in R&D	Yes	Building controls, automation, and networking are critical tools for effective and efficient facility operations emphasizing reduced energy consumption and emissions. With a broad portfolio of buildings, in terms of types, functions, and locations, development of unique solutions is a strategic focus for the short and medium term. Case study: The NBCU Connected Building program has been developed as an open protocol integration platform that provides connectivity to existing site building automation and metering system, allowing us to actively manage and mitigate our energy and climate impacts across the NBCUniversal portfolio, for short and medium term impact. Beginning in 2018, NBCUniversal designed and implemented the network, creating our own standards for point naming, tagging conventions and engineering sequences to run analytics on assets such as chiller plants, HVAC and power electronic equipment. Optimization protocols run continuously, tuning heavy equipment for efficiency and control and provides site-to-site benchmarking information. The connected building system has been integrated with asset and work management tools enabling predictive operations for site teams. Equipment proactively identified through analytics found to be running inefficiently is flagged automatically with work orders generated for correction, fully integrated into our financial planning. Long term, strategic R&D will continue to improve and integrate this system more broadly in coming years.
Operations	Yes	Comcast's global operations are vulnerable to climate-related risks. Extreme weather could lead to disruptions in our business. We have invested in implementing energy efficient technologies to reduce our operating costs while also reducing our emissions. As energy and fuel use are our largest emissions sources, we focus on energy efficiency/intensity, network design/powering, renewable energy procurement and fleet operations. This work helps make informed decisions to help maximize energy efficiency while improving service availability and reliability and supporting business growth in the short and medium time horizons. Case study: In 2019, we conducted a pilot designed to determine the most efficient cooling ratio at 10 of our critical infrastructure locations, utilizing set point adjustments, blanking panel installation and economizer optimization processes. This pilot reduced energy demand by over 15% in many cases and we expect the pilot's results will inform additional rollouts at our critical infrastructure locations in the short and medium time horizons.

C3.4

(C3.4) Describe where and how climate-related risks and opportunities have influenced your financial planning.

	Financial planning elements that have been influenced	Description of influence

	Financial planning elements that have been influenced	Description of influence
Row 1	Indirect costs	Indirect costs: Part of Comcast's short-term strategy is to reduce our risk from negative climate-related issues such as extreme weather events, wildfires, and floods. We have assessed the frequency and severity of extreme weather events that occur in a typical year as well as our cost to respond to such events and options to reduce the risk in the future. The cost to respond to damage from extreme weather, as well as the ongoing work to improve resiliency of our network during extreme weather events impacts our Indirect Costs and are incorporated into our annual budget planning process and our annual LRP process which covers financial planning over the next 5 years. Case study: Power outages from hurricanes, wildfires, floods, or other extreme weather events can affect our cable network in the United States, with the potential to negatively impact some portion of our 33 million residential and business customers. To reduce this risk of service interruption, we continually invest in backup power supplies such as batteries, UPS, and generators. We plan these investments in our budget and LRP on an annual basis. In addition, we have business continuity teams in each of our Division and Regional cable operations. Among other things, this group is responsible for tracking upcoming weather events and ensuring that the affected locations are prepared ahead of time (e.g., with fuel for backup power supplies) and are ready to respond if there is damage or outages. Given the possibility that extreme weather events increase in frequency with climate-change, we continue to plan for this contingency and mitigation measures in our financial planning processes.

C3.4a

(C3.4a) Provide any additional information on how climate-related risks and opportunities have influenced your strategy and financial planning (optional).

C4. Targets and performance

C4.1

(C4.1) Did you have an emissions target that was active in the reporting year?

Absolute target

C4.1a

(C4.1a) Provide details of your absolute emissions target(s) and progress made against those targets.

Target reference number
Abs 1

Year target was set
2021

Target coverage
Company-wide

Scope(s) (or Scope 3 category)
Scope 1+2 (market-based)

Base year
2019

Covered emissions in base year (metric tons CO2e)
2511475

Covered emissions in base year as % of total base year emissions in selected Scope(s) (or Scope 3 category)
100

Target year
2035

Targeted reduction from base year (%)
100

Covered emissions in target year (metric tons CO2e) [auto-calculated]
0

Covered emissions in reporting year (metric tons CO2e)
2222593

% of target achieved [auto-calculated]
11.5024836002747

Target status in reporting year
Underway

Is this a science-based target?
No, but we anticipate setting one in the next 2 years

Target ambition
<Not Applicable>

Please explain (including target coverage)
We have made the commitment to be carbon neutral by 2035 for Scope 1 and 2 emissions across our entire global operations. To meet our goals, we are focused on: 1) Sourcing

renewable and clean energy - We will shift to more zero carbon, renewable electricity by partnering with local utilities and investing in new renewable energy through power purchase agreements and securing renewable energy credits. 2) Improving our energy efficiency - Across our buildings, network, vehicle fleets, production studios, and theme parks, we will continue to develop and implement projects to improve energy efficiency. Combined with purchasing carbon offsets to address emissions that have not yet been mitigated, these efforts will help us further reduce our carbon footprint. 3) Measuring and reporting on our Scope 1 and 2 emissions annually - To provide transparency and help drive improvement, we have reported data for 2019 and 2020 using the GHG Protocol in alignment with the Sustainability Accounting Standards Board (SASB) framework. We have partnered with a leading consulting firm to guide us through this and help develop our reporting and estimation approach to make sure we get it right. We realize this public commitment is the first step and we will continue to share our approach and progress as we work towards our goals.

Target reference number
Abs 2

Year target was set
2018

Target coverage
Business division

Scope(s) (or Scope 3 category)
Scope 1+2 (market-based) +3 (upstream & downstream)

Base year
2018

Covered emissions in base year (metric tons CO2e)
73062

Covered emissions in base year as % of total base year emissions in selected Scope(s) (or Scope 3 category)
3.6

Target year
2030

Targeted reduction from base year (%)
50

Covered emissions in target year (metric tons CO2e) [auto-calculated]
36531

Covered emissions in reporting year (metric tons CO2e)
60770

% of target achieved [auto-calculated]
33.6481344611426

Target status in reporting year
Underway

Is this a science-based target?
Yes, and this target has been approved by the Science-Based Targets initiative

Target ambition
1.5°C aligned

Please explain (including target coverage)
SkyZero is a 2030 Zero Carbon goal that applies only to the Sky business unit. This target covers Sky's Scope 1, 2, and 3 emissions and is in line with a 1.5 degree C trajectory. This target has been approved by the Science-based Targets Initiative in May 2021. Note: Comcast at an enterprise-level has not yet calculated its Scope 3 inventory. Scope 3 inventory has been calculated only for our Sky business. Hence the calculations in the "Covered emissions in base year" exclude Sky's scope 3 emissions. Similarly, the "covered emissions in reporting year" excludes Sky's Scope 3 numbers.

C4.2

(C4.2) Did you have any other climate-related targets that were active in the reporting year?
Target(s) to increase low-carbon energy consumption or production
Net-zero target(s)
Other climate-related target(s)

C4.2a

(C4.2a) Provide details of your target(s) to increase low-carbon energy consumption or production.

Target reference number
Low 1

Year target was set
2016

Target coverage
Business division

Target type: absolute or intensity

Absolute

Target type: energy carrier
Electricity

Target type: activity
Consumption

Target type: energy source
Renewable energy source(s) only

Metric (target numerator if reporting an intensity target)
Percentage

Target denominator (intensity targets only)
<Not Applicable>

Base year
2009

Figure or percentage in base year
0

Target year
2020

Figure or percentage in target year
100

Figure or percentage in reporting year
100

% of target achieved [auto-calculated]
100

Target status in reporting year
Achieved

Is this target part of an emissions target?
Yes, this contributes to the overall Sky Zero initiative and Science based Targets initiative (SBTi) approved target to reduce absolute scope 1, 2 and 3 GHG emissions 50% by 2030 from a 2018 base year.

Is this target part of an overarching initiative?
RE100

Please explain (including target coverage)

C4.2b

(C4.2b) Provide details of any other climate-related targets, including methane reduction targets.

Target reference number
Oth 1

Year target was set
2020

Target coverage
Business division

Target type: absolute or intensity
Absolute

Target type: category & Metric (target numerator if reporting an intensity target)

Low-carbon vehicles	Percentage of low-carbon vehicles in company fleet

Target denominator (intensity targets only)
<Not Applicable>

Base year
2020

Figure or percentage in base year
0.19

Target year
2030

Figure or percentage in target year
100

Figure or percentage in reporting year
0.19

% of target achieved [auto-calculated]
0

Target status in reporting year
Underway

Is this target part of an emissions target?
Yes this is part of the Sky Zero target to achieve net zero carbon by 2030.

Is this target part of an overarching initiative?
EV100

Please explain (including target coverage)

This target is applicable only to the Sky business division. The figure or percentage in the base and reporting year is calculated by dividing the number of fully electric vehicles (11) over the total number of vehicles in Sky's fleet (5,700). Please note that Sky has also invested in 151 hybrid-electric vans that are a first step in reducing the emissions of its fleet while EV technology continues to advance. Sky fleet plans to transition its fleet of 5,700 vehicles to electric by 2030.

C4.2c

(C4.2c) Provide details of your net-zero target(s).

Target reference number

NZ1

Target coverage

Business division

Absolute/intensity emission target(s) linked to this net-zero target

Abs2

Target year for achieving net zero

2030

Is this a science-based target?

No, but we are reporting another target that is science-based

Please explain (including target coverage)

This net zero carbon target covers only the Sky business division. Sky plans to become net zero carbon by: • making all of its tech products more energy efficient • developing the world's most sustainable film and TV studios • making every Sky original production, TV channel, show and film net zero carbon • transforming its 5,000 vehicles to create a zero emissions fleet • helping the 11,000 companies that work with Sky, whether they're making Sky boxes or producing the next hit TV series, on their path to net zero carbon • And by planting trees, mangroves and seagrass to absorb the carbon

C4.3

(C4.3) Did you have emissions reduction initiatives that were active within the reporting year? Note that this can include those in the planning and/or implementation phases.

Yes

C4.3a

(C4.3a) Identify the total number of initiatives at each stage of development, and for those in the implementation stages, the estimated CO2e savings.

	Number of initiatives	Total estimated annual CO2e savings in metric tonnes CO2e (only for rows marked *)
Under investigation	1	
To be implemented*	180	7424
Implementation commenced*	79	2074
Implemented*	113	47614
Not to be implemented	0	

C4.3b

(C4.3b) Provide details on the initiatives implemented in the reporting year in the table below.

Initiative category & Initiative type

Energy efficiency in buildings	Lighting

Estimated annual CO2e savings (metric tonnes CO2e)

4776

Scope(s)

Scope 2 (location-based)
Scope 2 (market-based)

Voluntary/Mandatory

Voluntary

Annual monetary savings (unit currency – as specified in C0.4)

675000

Investment required (unit currency – as specified in C0.4)

3797000

Payback period

4-10 years

Estimated lifetime of the initiative

21-30 years

Comment
Comcast Cable has invested in upgrading to LED lighting at more than 100 sites. Sky has also invested in energy efficient lighting for its operations.

Initiative category & Initiative type

Waste reduction and material circularity	Waste reduction

Estimated annual CO2e savings (metric tonnes CO2e)
17

Scope(s)
Scope 3

Voluntary/Mandatory
Voluntary

Annual monetary savings (unit currency – as specified in C0.4)
55100

Investment required (unit currency – as specified in C0.4)
0

Payback period
No payback

Estimated lifetime of the initiative
>30 years

Comment
Comcast has instituted waste reduction activities throughout its offices. This leads to less waste being hauled.

Initiative category & Initiative type

Low-carbon energy generation	Solar PV

Estimated annual CO2e savings (metric tonnes CO2e)
2927

Scope(s)
Scope 2 (location-based)
Scope 2 (market-based)

Voluntary/Mandatory
Voluntary

Annual monetary savings (unit currency – as specified in C0.4)
421150

Investment required (unit currency – as specified in C0.4)

392300

Payback period
4-10 years

Estimated lifetime of the initiative
21-30 years

Comment
Comcast has installed onsite solar in a number of our locations

---

Initiative category & Initiative type

Transportation	Company fleet vehicle efficiency

Estimated annual CO2e savings (metric tonnes CO2e)
20000

Scope(s)
Scope 1

Voluntary/Mandatory
Voluntary

Annual monetary savings (unit currency – as specified in C0.4)
942000

Investment required (unit currency – as specified in C0.4)
6227000

Payback period
<1 year

Estimated lifetime of the initiative
11-15 years

Comment
Sky's UK van fleet is one of the biggest contributors to its operational emissions. In November 2020, Sky assigned 151 new plug-In hybrid electric vans to use geofencing technology. Geofencing technology switches the vans into electric-only mode in urban and low emission areas. Sky works closely with manufacturers to constantly trial new vehicles

---

Initiative category & Initiative type

Energy efficiency in production processes	Product or service design

Estimated annual CO2e savings (metric tonnes CO2e)
19894

Scope(s)
Scope 3

Voluntary/Mandatory
Voluntary

Annual monetary savings (unit currency – as specified in C0.4)
0

Investment required (unit currency – as specified in C0.4)
137000

Payback period
<1 year

Estimated lifetime of the initiative
6-10 years

Comment
The following comment pertains to Sky business only. The footprint of the use of Sky product in Sky customer homes has gone down by 9.6% in 2020 compared to 2019. The latest model of the Sky Q box launched at the end of 2019 introduced a 40% improvement in the efficiency of the Sky Q box. Sky uses software updates to introduce new features to Sky Q boxes in customers' homes. A dedicated team within Sky Group Product, works to find ways to drive significant new energy efficiencies the same way. In March 2020, Sky introduced a service model for its new broadband contracts, bringing them in line with its Sky Q boxes. Sky retains ownership of the equipment, so Sky can ensure every box we Sky has made is in use, refurbished or recycled, increasing resource efficiency. Sky is continuing to work with the University of Bristol and other broadcasters on the 'DIMPACT' tool, which maps the impact of the digital media content delivery to people's devices. This will enable digital content companies to make more informed decisions to reduce carbon emissions.

C4.3c

(C4.3c) What methods do you use to drive investment in emissions reduction activities?

Method	Comment
Employee engagement	Comcast and NBCUniversal's operational fleet include more than 30,000 Xfinity vans, trucks, SUVs, sedans, and the vehicles that support our theme parks, film and television production studios, and news teams. Every Minute Matters, an employee engagement campaign launched in 2020, encourages Comcast Cable fulfilment technicians, supervisors, and managers to reduce idle time in their vehicles, reducing fuel consumption and emissions by turning off the engine when finishing job tasks or loading equipment.

Method	Comment
Dedicated budget for other emissions reduction activities	Increasing our reliance on low- and no-carbon energy sources is a key part of our strategy to become carbon neutral across our operations. That's why in Houston, Comcast Cable has committed to purchasing 100% renewable energy for our cable facilities and network operations. In partnership with TXU Energy, more than 50 Comcast facilities and 11,000 power supplies throughout the area will be powered by renewable energy from the Foard City Wind Farm through 2031. The TXU Energy agreement covers nearly all the Houston region's electricity footprint, with the remainder covered by the purchase of renewable energy certificates (RECs). We also contracted for 18,000 MWh of renewable electricity in Comcast Cable's Chicago region.
Dedicated budget for energy efficiency	Energy efficiency is a key strategic approach for reducing emissions in our buildings. We focus on the largest energy consumers in the built environment - HVAC, lighting, and plug load. Significant investments were made in energy efficient LED lighting for many buildings, which will reduce energy consumption.

C4.5

(C4.5) Do you classify any of your existing goods and/or services as low-carbon products or do they enable a third party to avoid GHG emissions?

No

C5. Emissions methodology

C5.1

(C5.1) Provide your base year and base year emissions (Scopes 1 and 2).

Scope 1

Base year start

January 1 2019

Base year end

December 31 2019

Base year emissions (metric tons CO2e)

676422

Comment

During 2020, Comcast undertook meaningful efforts to improve the quality and accuracy of Scope 1 and Scope 2 emissions reporting, including emissions reported in 2019. Select historical data has been restated due to the addition of international facilities, joint ventures

and certain other entities, as well as improvements to data collection and estimation methodologies utilized when actual data is not available.

Scope 2 (location-based)

Base year start
January 1 2019

Base year end
December 31 2019

Base year emissions (metric tons CO2e)
1863480

Comment
During 2020, Comcast undertook meaningful efforts to improve the quality and accuracy of Scope 1 and Scope 2 emissions reporting, including emissions reported in 2019. Select historical data has been restated due to the addition of international facilities, joint ventures and certain other entities, as well as improvements to data collection and estimation methodologies utilized when actual data is not available.

Scope 2 (market-based)

Base year start
January 1 2019

Base year end
December 31 2019

Base year emissions (metric tons CO2e)
1835053

Comment
During 2020, Comcast undertook meaningful efforts to improve the quality and accuracy of Scope 1 and Scope 2 emissions reporting, including emissions reported in 2019. Select historical data has been restated due to the addition of international facilities, joint ventures and certain other entities, as well as improvements to data collection and estimation methodologies utilized when actual data is not available.

C5.2

(C5.2) Select the name of the standard, protocol, or methodology you have used to collect activity data and calculate emissions.
The Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard (Revised Edition)
The Greenhouse Gas Protocol: Scope 2 Guidance

C6. Emissions data

C6.1

(C6.1) What were your organization's gross global Scope 1 emissions in metric tons CO2e?

Reporting year

Gross global Scope 1 emissions (metric tons CO2e)
547084

Start date
<Not Applicable>

End date
<Not Applicable>

Comment
Please refer to response provided for C5.1.

C6.2

(C6.2) Describe your organization's approach to reporting Scope 2 emissions.

Row 1

Scope 2, location-based
We are reporting a Scope 2, location-based figure

Scope 2, market-based
We are reporting a Scope 2, market-based figure

Comment

C6.3

(C6.3) What were your organization's gross global Scope 2 emissions in metric tons CO2e?

Reporting year

Scope 2, location-based

1743564

Scope 2, market-based (if applicable)

1675509

Start date

<Not Applicable>

End date

<Not Applicable>

Comment

During 2020, Comcast undertook meaningful efforts to improve the quality and accuracy of Scope 1 and Scope 2 emissions reporting, including emissions reported in 2019. Select historical data has been restated due to the addition of international facilities, joint ventures and certain other entities, as well as improvements to data collection and estimation methodologies utilized when actual data is not available.

C6.4

(C6.4) Are there any sources (e.g. facilities, specific GHGs, activities, geographies, etc.) of Scope 1 and Scope 2 emissions that are within your selected reporting boundary which are not included in your disclosure?

No

C6.5

(C6.5) Account for your organization's gross global Scope 3 emissions, disclosing and explaining any exclusions.

Purchased goods and services

Evaluation status

Relevant, not yet calculated

Metric tonnes CO2e

<Not Applicable>

Emissions calculation methodology

<Not Applicable>

Percentage of emissions calculated using data obtained from suppliers or value chain partners

<Not Applicable>

Please explain

Capital goods

Evaluation status

Relevant, not yet calculated

Metric tonnes CO2e

<Not Applicable>

Emissions calculation methodology

<Not Applicable>

Percentage of emissions calculated using data obtained from suppliers or value chain partners

<Not Applicable>

Please explain

Fuel-and-energy-related activities (not included in Scope 1 or 2)

Evaluation status

Relevant, not yet calculated

Metric tonnes CO2e

<Not Applicable>

Emissions calculation methodology

<Not Applicable>

Percentage of emissions calculated using data obtained from suppliers or value chain partners

<Not Applicable>

Please explain

Upstream transportation and distribution

Evaluation status

Relevant, not yet calculated

Metric tonnes CO2e

<Not Applicable>

Emissions calculation methodology

<Not Applicable>

Percentage of emissions calculated using data obtained from suppliers or value chain partners

<Not Applicable>

Please explain

Waste generated in operations

Evaluation status
Relevant, not yet calculated

Metric tonnes CO2e
<Not Applicable>

Emissions calculation methodology
<Not Applicable>

Percentage of emissions calculated using data obtained from suppliers or value chain partners
<Not Applicable>

Please explain

Business travel

Evaluation status
Relevant, not yet calculated

Metric tonnes CO2e
<Not Applicable>

Emissions calculation methodology
<Not Applicable>

Percentage of emissions calculated using data obtained from suppliers or value chain partners
<Not Applicable>

Please explain

Employee commuting

Evaluation status
Relevant, not yet calculated

Metric tonnes CO2e
<Not Applicable>

Emissions calculation methodology
<Not Applicable>

Percentage of emissions calculated using data obtained from suppliers or value chain partners
<Not Applicable>

Please explain

Upstream leased assets

Evaluation status
Relevant, not yet calculated

Metric tonnes CO2e
<Not Applicable>

Emissions calculation methodology
<Not Applicable>

Percentage of emissions calculated using data obtained from suppliers or value chain partners
<Not Applicable>

Please explain

Downstream transportation and distribution

Evaluation status
Relevant, not yet calculated

Metric tonnes CO2e
<Not Applicable>

Emissions calculation methodology
<Not Applicable>

Percentage of emissions calculated using data obtained from suppliers or value chain partners
<Not Applicable>

Please explain

Processing of sold products

Evaluation status
Relevant, not yet calculated

Metric tonnes CO2e
<Not Applicable>

Emissions calculation methodology
<Not Applicable>

Percentage of emissions calculated using data obtained from suppliers or value chain partners
<Not Applicable>

Please explain

Use of sold products

Evaluation status

Relevant, not yet calculated

Metric tonnes CO2e

<Not Applicable>

Emissions calculation methodology

<Not Applicable>

Percentage of emissions calculated using data obtained from suppliers or value chain partners

<Not Applicable>

Please explain

End of life treatment of sold products

Evaluation status

Relevant, not yet calculated

Metric tonnes CO2e

<Not Applicable>

Emissions calculation methodology

<Not Applicable>

Percentage of emissions calculated using data obtained from suppliers or value chain partners

<Not Applicable>

Please explain

Downstream leased assets

Evaluation status

Relevant, not yet calculated

Metric tonnes CO2e

<Not Applicable>

Emissions calculation methodology

<Not Applicable>

Percentage of emissions calculated using data obtained from suppliers or value chain partners

<Not Applicable>

Please explain

Franchises

Evaluation status

Relevant, not yet calculated

Metric tonnes CO2e

<Not Applicable>

Emissions calculation methodology

<Not Applicable>

Percentage of emissions calculated using data obtained from suppliers or value chain partners

<Not Applicable>

Please explain

Investments

Evaluation status

Relevant, not yet calculated

Metric tonnes CO2e

<Not Applicable>

Emissions calculation methodology

<Not Applicable>

Percentage of emissions calculated using data obtained from suppliers or value chain partners

<Not Applicable>

Please explain

Other (upstream)

Evaluation status

Please select

Metric tonnes CO2e

<Not Applicable>

Emissions calculation methodology

<Not Applicable>

Percentage of emissions calculated using data obtained from suppliers or value chain partners

<Not Applicable>

Please explain

Other (downstream)

Evaluation status

Please select

Metric tonnes CO2e
<Not Applicable>

Emissions calculation methodology
<Not Applicable>

Percentage of emissions calculated using data obtained from suppliers or value chain partners
<Not Applicable>

Please explain

C6.7

(C6.7) Are carbon dioxide emissions from biogenic carbon relevant to your organization?
No

C6.10

(C6.10) Describe your gross global combined Scope 1 and 2 emissions for the reporting year in metric tons CO2e per unit currency total revenue and provide any additional intensity metrics that are appropriate to your business operations.

Intensity figure
22

Metric numerator (Gross global combined Scope 1 and 2 emissions, metric tons CO2e)
2222593

Metric denominator
Other, please specify (Unit total revenue (million USD))

Metric denominator: Unit total
103564

Scope 2 figure used
Market-based

% change from previous year
7

Direction of change
Decreased

Reason for change

During 2020, our businesses were impacted due to the novel coronavirus disease 2019 ("COVID-19"), which along with continued efforts to reduce our greenhouse gas emissions and increase our use of renewable energy, caused our global emissions in 2020 to decrease compared to 2019.

C7. Emissions breakdowns

C7.1

(C7.1) Does your organization break down its Scope 1 emissions by greenhouse gas type?

Yes

C7.1a

(C7.1a) Break down your total gross global Scope 1 emissions by greenhouse gas type and provide the source of each used greenhouse warming potential (GWP).

Greenhouse gas	Scope 1 emissions (metric tons of CO2e)	GWP Reference
CO2	452341	IPCC Fifth Assessment Report (AR5 – 100 year)
CH4	347	IPCC Fifth Assessment Report (AR5 – 100 year)
N2O	2070	IPCC Fifth Assessment Report (AR5 – 100 year)
HFCs	33965	IPCC Fifth Assessment Report (AR5 – 100 year)
Other, please specify (non-HFC)	58361	IPCC Fifth Assessment Report (AR5 – 100 year)

C7.2

(C7.2) Break down your total gross global Scope 1 emissions by country/region.

Country/Region	Scope 1 emissions (metric tons CO2e)
US, Latin America and Caribbean (USLAC)	469062
Asia Pacific (or JAPA)	35248
Europe and Africa	42355
South America	419

C7.3

(C7.3) Indicate which gross global Scope 1 emissions breakdowns you are able to provide.

By business division

By activity

C7.3a

(C7.3a) Break down your total gross global Scope 1 emissions by business division.

Business division	Scope 1 emissions (metric ton CO2e)
Comcast Corporate & Cable Communications	414678
NBCUniversal	96852
Sky	35553

C7.3c

(C7.3c) Break down your total gross global Scope 1 emissions by business activity.

Activity	Scope 1 emissions (metric tons CO2e)
Stationary combustion	106749
Mobile combustion	348010
Fugitive Emissions	92325

C7.5

(C7.5) Break down your total gross global Scope 2 emissions by country/region.

Country/Region	Scope 2, location-based (metric tons CO2e)	Scope 2, market-based (metric tons CO2e)	Purchased and consumed electricity, heat, steam or cooling (MWh)	Purchased and consumed low-carbon electricity, heat, steam or cooling accounted for in Scope 2 market-based approach (MWh)
US, Latin America and Caribbean (USLAC)	1627165	1584346	4163827	102498
Asia Pacific (or JAPA)	59762	59762	223970	
Europe and Africa	56064	30829	240774	145998
South America	573	572	3083	

C7.6

(C7.6) Indicate which gross global Scope 2 emissions breakdowns you are able to provide.

By business division

By activity

C7.6a

(C7.6a) Break down your total gross global Scope 2 emissions by business division.

Business division	Scope 2, location-based (metric tons CO2e)	Scope 2, market-based (metric tons CO2e)
Comcast Corporate & Cable Communications	1387729	1344917
NBCUniversal Media	303560	305375
Sky	52275	25217

C7.6c

(C7.6c) Break down your total gross global Scope 2 emissions by business activity.

Activity	Scope 2, location-based (metric tons CO2e)	Scope 2, market-based (metric tons CO2e)

Activity	Scope 2, location-based (metric tons CO2e)	Scope 2, market-based (metric tons CO2e)
Electricity	1731232	1663238
Purchased cooling	7618	7618
Purchased steam	3100	3100
Purchased heat	1614	1553

C7.9

(C7.9) How do your gross global emissions (Scope 1 and 2 combined) for the reporting year compare to those of the previous reporting year?

Decreased

C7.9a

(C7.9a) Identify the reasons for any change in your gross global emissions (Scope 1 and 2 combined), and for each of them specify how your emissions compare to the previous year.

	Change in emissions (metric tons CO2e)	Direction of change	Emissions value (percentage)	Please explain calculation
Change in renewable energy consumption	53435	Decreased	2.1	Renewable energy purchases were 254,858 MWh in 2020 compared to 146,824 MWh in 2019. This increase in renewable energy purchase resulted in a decrease of 53,434 tCO2e in our Scope 2 market-based method compared to 2019. The calculation is as follows: (-53,434 [reduction in Scope 2 market-based method emissions attributable to renewable energy])/ (2,511,476 [Total of 2019 Scope 1 and Scope 2 market-based method emissions]) = -0.021
Other emissions reduction activities	27703	Decreased	1.1	During 2020, Comcast implemented multiple emissions reducing initiatives that decreased our Scope 1 and Scope 2 market-based method emissions compared to 2019. For example, Comcast Cable has invested in upgrading to LED lighting at more than 100 sites. Sky has also invested in energy efficient lighting for its operations. Additionally, Comcast has installed onsite solar at multiple locations. The calculation is as follows: (-27,703 [reduction in Scope 2 market-based method emissions attributable to renewable energy])/ (2,511,476 [Total of 2019 Scope 1 and Scope 2 market-based method emissions]) = -0.011
Divestment		<Not Applicable>		

	Change in emissions (metric tons CO2e)	Direction of change	Emissions value (percentage)	Please explain calculation
Acquisitions		<Not Applicable>		
Mergers		<Not Applicable>		
Change in output		<Not Applicable>		
Change in methodology		<Not Applicable>		
Change in boundary		<Not Applicable>		
Change in physical operating conditions		<Not Applicable>		
Unidentified		<Not Applicable>		
Other	235446	Decreased	8.3	The impact of the novel coronavirus disease 2019 ("COVID-19") on our businesses and other energy efficiency initiatives resulted in a decrease of 8.3% of Scope 1 and Scope 2 market-based method emissions compared to 2019. The calculation is as follows: (-288,880 [Reduction in Scope 1 and Scope 2 market-based method] + (53,434 [reduction in Scope 2 market-based method emissions attributable to renewable energy]) + (27,703 [reduction in Scope 1 and 2 market-based method emissions attributable to emissions reduction initiatives])/(2,511,476 [Total of 2019 Scope 1 and Scope 2 market-based method emissions]) = -0.083

C7.9b

(C7.9b) Are your emissions performance calculations in C7.9 and C7.9a based on a location-based Scope 2 emissions figure or a market-based Scope 2 emissions figure?

Market-based

C8. Energy

C8.1

(C8.1) What percentage of your total operational spend in the reporting year was on energy?

More than 0% but less than or equal to 5%

C8.2

(C8.2) Select which energy-related activities your organization has undertaken.

	Indicate whether your organization undertook this energy-related activity in the reporting year
Consumption of fuel (excluding feedstocks)	Yes
Consumption of purchased or acquired electricity	Yes
Consumption of purchased or acquired heat	Yes
Consumption of purchased or acquired steam	Yes
Consumption of purchased or acquired cooling	Yes
Generation of electricity, heat, steam, or cooling	Yes

C8.2a

(C8.2a) Report your organization's energy consumption totals (excluding feedstocks) in MWh.

	Heating value	MWh from renewable sources	MWh from non-renewable sources	Total (renewable and non-renewable) MWh
Consumption of fuel (excluding feedstock)	HHV (higher heating value)	3040	563080	566120
Consumption of purchased or acquired electricity	<Not Applicable>	248496	4187510	4436006

	Heating value	MWh from renewable sources	MWh from non-renewable sources	Total (renewable and non-renewable) MWh
Consumption of purchased or acquired heat	<Not Applicable>		10028	10028
Consumption of purchased or acquired steam	<Not Applicable>		13683	13683
Consumption of purchased or acquired cooling	<Not Applicable>		33627	33627
Consumption of self-generated non-fuel renewable energy	<Not Applicable>	6362	<Not Applicable>	6362
Total energy consumption	<Not Applicable>	257898	4807928	5065826

C8.2b

(C8.2b) Select the applications of your organization's consumption of fuel.

	Indicate whether your organization undertakes this fuel application
Consumption of fuel for the generation of electricity	Yes
Consumption of fuel for the generation of heat	Yes
Consumption of fuel for the generation of steam	No
Consumption of fuel for the generation of cooling	No
Consumption of fuel for co-generation or tri-generation	No

C8.2c

(C8.2c) State how much fuel in MWh your organization has consumed (excluding feedstocks) by fuel type.

Fuels (excluding feedstocks)
Natural Gas

Heating value
HHV (higher heating value)

Total fuel MWh consumed by the organization
500768

MWh fuel consumed for self-generation of electricity

MWh fuel consumed for self-generation of heat
500768

MWh fuel consumed for self-generation of steam
<Not Applicable>

MWh fuel consumed for self-generation of cooling
<Not Applicable>

MWh fuel consumed for self-cogeneration or self-trigeneration
<Not Applicable>

Emission factor
53.1148

Unit
kg CO2e per million Btu

Emissions factor source
EPA Center for Corporate Climate Leadership - Emission Factors for Greenhouse Gas Inventories (26 March 2020)

Comment

Fuels (excluding feedstocks)
Propane Liquid

Heating value
HHV (higher heating value)

Total fuel MWh consumed by the organization
5064

MWh fuel consumed for self-generation of electricity
5064

MWh fuel consumed for self-generation of heat

MWh fuel consumed for self-generation of steam
<Not Applicable>

MWh fuel consumed for self-generation of cooling
<Not Applicable>

MWh fuel consumed for self-cogeneration or self-trigeneration
<Not Applicable>

Emission factor
61.7138

Unit
kg CO2e per million Btu

Emissions factor source
EPA Center for Corporate Climate Leadership - Emission Factors for Greenhouse Gas Inventories (26 March 2020)

Comment

Fuels (excluding feedstocks)
Fuel Oil Number 2

Heating value
HHV (higher heating value)

Total fuel MWh consumed by the organization
41977

MWh fuel consumed for self-generation of electricity
41977

MWh fuel consumed for self-generation of heat

MWh fuel consumed for self-generation of steam
<Not Applicable>

MWh fuel consumed for self-generation of cooling
<Not Applicable>

MWh fuel consumed for self-cogeneration or self-trigeneration
<Not Applicable>

Emission factor
10.24409

Unit
kg CO2e per gallon

Emissions factor source
EPA Center for Corporate Climate Leadership - Emission Factors for Greenhouse Gas Inventories (26 March 2020)

Comment

Fuels (excluding feedstocks)
Motor Gasoline

Heating value
HHV (higher heating value)

Total fuel MWh consumed by the organization
817

MWh fuel consumed for self-generation of electricity
817

MWh fuel consumed for self-generation of heat

MWh fuel consumed for self-generation of steam
<Not Applicable>

MWh fuel consumed for self-generation of cooling
<Not Applicable>

MWh fuel consumed for self-cogeneration or self-trigeneration
<Not Applicable>

Emission factor
8.81334

Unit
kg CO2e per gallon

Emissions factor source
EPA Center for Corporate Climate Leadership - Emission Factors for Greenhouse Gas Inventories (26 March 2020)

Comment

Fuels (excluding feedstocks)
Biodiesel

Heating value
HHV (higher heating value)

Total fuel MWh consumed by the organization
3040

MWh fuel consumed for self-generation of electricity
3040

MWh fuel consumed for self-generation of heat

MWh fuel consumed for self-generation of steam
<Not Applicable>

MWh fuel consumed for self-generation of cooling
<Not Applicable>

MWh fuel consumed for self-cogeneration or self-trigeneration
<Not Applicable>

Emission factor
9.45648

Unit
kg CO2e per gallon

Emissions factor source
EPA Center for Corporate Climate Leadership - Emission Factors for Greenhouse Gas Inventories (26 March 2020)

Comment

Fuels (excluding feedstocks)
Kerosene

Heating value
HHV (higher heating value)

Total fuel MWh consumed by the organization
190

MWh fuel consumed for self-generation of electricity
190

MWh fuel consumed for self-generation of heat

MWh fuel consumed for self-generation of steam
<Not Applicable>

MWh fuel consumed for self-generation of cooling
<Not Applicable>

MWh fuel consumed for self-cogeneration or self-trigeneration
<Not Applicable>

Emission factor
10.18409

Unit
kg CO2e per gallon

Emissions factor source
EPA Center for Corporate Climate Leadership - Emission Factors for Greenhouse Gas Inventories (26 March 2020)

Comment

Fuels (excluding feedstocks)
Liquefied Petroleum Gas (LPG)

Heating value
HHV (higher heating value)

Total fuel MWh consumed by the organization
14264

MWh fuel consumed for self-generation of electricity
14264

MWh fuel consumed for self-generation of heat

MWh fuel consumed for self-generation of steam
<Not Applicable>

MWh fuel consumed for self-generation of cooling
<Not Applicable>

MWh fuel consumed for self-cogeneration or self-trigeneration
<Not Applicable>

Emission factor
5.70488

Unit
kg CO2e per gallon

Emissions factor source
EPA Center for Corporate Climate Leadership - Emission Factors for Greenhouse Gas Inventories (26 March 2020)

Comment

C8.2d

(C8.2d) Provide details on the electricity, heat, steam, and cooling your organization has generated and consumed in the reporting year.

	Total Gross generation (MWh)	Generation that is consumed by the organization (MWh)	Gross generation from renewable sources (MWh)	Generation from renewable sources that is consumed by the organization (MWh)
Electricity	73381	71713	11069	9402
Heat	500768	500768	0	0
Steam				
Cooling				

C8.2e

(C8.2e) Provide details on the electricity, heat, steam, and/or cooling amounts that were accounted for at a zero emission factor in the market-based Scope 2 figure reported in C6.3.

Sourcing method
Green electricity products (e.g. green tariffs) from an energy supplier, supported by energy attribute certificates

Low-carbon technology type
Solar

Country/area of consumption of low-carbon electricity, heat, steam or cooling
United States of America

MWh consumed accounted for at a zero emission factor
1065

Comment

Sourcing method
Green electricity products (e.g. green tariffs) from an energy supplier, supported by energy attribute certificates

Low-carbon technology type
Other, please specify (Solar, wind and hydropower)

Country/area of consumption of low-carbon electricity, heat, steam or cooling
United Kingdom of Great Britain and Northern Ireland

MWh consumed accounted for at a zero emission factor
145998

Comment

Sourcing method
Unbundled energy attribute certificates, Renewable Energy Certificates (RECs)

Low-carbon technology type
Wind

Country/area of consumption of low-carbon electricity, heat, steam or cooling
United States of America

MWh consumed accounted for at a zero emission factor
101433

Comment

C9. Additional metrics

C9.1

(C9.1) Provide any additional climate-related metrics relevant to your business.

C10. Verification

C10.1

(C10.1) Indicate the verification/assurance status that applies to your reported emissions.

	Verification/assurance status
Scope 1	Third-party verification or assurance process in place
Scope 2 (location-based or market-based)	Third-party verification or assurance process in place
Scope 3	No third-party verification or assurance

C10.1a

(C10.1a) Provide further details of the verification/assurance undertaken for your Scope 1 emissions, and attach the relevant statements.

Verification or assurance cycle in place
Annual process

Status in the current reporting year
Complete

Type of verification or assurance
Limited assurance

Attach the statement

2020 Emissions Assurance Statement.pdf

Page/ section reference
1,2

Relevant standard
ISAE3000

Proportion of reported emissions verified (%)
7

C10.1b

(C10.1b) Provide further details of the verification/assurance undertaken for your Scope 2 emissions and attach the relevant statements.

Scope 2 approach
Scope 2 location-based

Verification or assurance cycle in place
Annual process

Status in the current reporting year
Complete

Type of verification or assurance
Limited assurance

Attach the statement
2020 Emissions Assurance Statement.pdf

Page/ section reference
1,2

Relevant standard
ISAE3000

Proportion of reported emissions verified (%)
3

Scope 2 approach
Scope 2 market-based

Verification or assurance cycle in place
Annual process

Status in the current reporting year

Complete

Type of verification or assurance
Limited assurance

Attach the statement
2020 Emissions Assurance Statement.pdf

Page/ section reference
1,2

Relevant standard
ISAE3000

Proportion of reported emissions verified (%)
2

C10.2

(C10.2) Do you verify any climate-related information reported in your CDP disclosure other than the emissions figures reported in C6.1, C6.3, and C6.5?
No, we do not verify any other climate-related information reported in our CDP disclosure

C11. Carbon pricing

C11.1

(C11.1) Are any of your operations or activities regulated by a carbon pricing system (i.e. ETS, Cap & Trade or Carbon Tax)?
Yes

C11.1a

(C11.1a) Select the carbon pricing regulation(s) which impacts your operations.
EU ETS

C11.1b

(C11.1b) Complete the following table for each of the emissions trading schemes you are regulated by.

EU ETS

% of Scope 1 emissions covered by the ETS
0.4

% of Scope 2 emissions covered by the ETS
0

Period start date
January 1 2020

Period end date
December 31 2020

Allowances allocated
606

Allowances purchased
72745

Verified Scope 1 emissions in metric tons CO2e
2274

Verified Scope 2 emissions in metric tons CO2e
0

Details of ownership
Facilities we own and operate

Comment
EU ETS is applicable for Sky operations in Europe only. The percentage of emissions covered is stated in terms of Comcast's overall greenhouse gas emissions (i.e., 0.4% of Comcast's Scope 1 emissions; 6.4% of Sky's Scope 1 emissions).

C11.1d

(C11.1d) What is your strategy for complying with the systems you are regulated by or anticipate being regulated by?

UK Streamlined Energy & Carbon Reporting, SECR, includes requirements for energy and carbon emissions reporting in the UK and Ireland, putting more responsibility on organizations to choose how they measure and report their emissions. This covers all of Sky UK and Ireland, reporting on scope 1 and 2 greenhouse gas emissions. Additionally, Sky is required to report on global energy use, where appropriate. It will also contribute to the UK government's Clean Growth Strategy ambition of enabling business and industry to improve their energy productivity by at least 20% by 2030. Sky seeks to ensure that it complies with SECR reporting. Sky also relies on an external third-party consultant and maintains a Lead Assessor, one of the requirements of the scheme. Sky's submissions as part of the Carbon Reduction Commitment are both internally and externally audited.

Sky also participates in the EU Emissions Trading Scheme (EU ETS) which is a carbon trading scheme to help the EU meet its greenhouse gas emissions targets under the Kyoto protocol. Sky monitors and reports its EU ETS emissions every calendar year with the support of an external consultant.

Neither regulation is expected to have materially adverse effects on Sky's business.

C11.2

(C11.2) Has your organization originated or purchased any project-based carbon credits within the reporting period?

Yes

C11.2a

(C11.2a) Provide details of the project-based carbon credits originated or purchased by your organization in the reporting period.

Credit origination or credit purchase

Credit purchase

Project type

Other, please specify (Renewable energy, reforestation, mangrove restoration and improved water infrastructure)

Project identification

Sky participated in voluntary carbon offsetting of unavoidable Scope 1 and 2 emissions to remain Carbon Neutral as a business. Projects Sky invests in include Acre, Amazonian rainforest REDD+, RIMBA RAYA REDD+ project, mangrove restoration in Brazil, Indonesia, Mexico and Kenya.

Verified to which standard
Other, please specify (VCS+CCBA and Gold Standard)

Number of credits (metric tonnes CO2e)
95000

Number of credits (metric tonnes CO2e): Risk adjusted volume
100000

Credits cancelled
Yes

Purpose, e.g. compliance
Voluntary Offsetting

C11.3

(C11.3) Does your organization use an internal price on carbon?
Yes

C11.3a

(C11.3a) Provide details of how your organization uses an internal price on carbon.

Objective for implementing an internal carbon price
Navigate GHG regulations
Stakeholder expectations
Change internal behavior
Drive energy efficiency
Drive low-carbon investment
Stress test investments
Identify and seize low-carbon opportunities
Supplier engagement

GHG Scope
Scope 1
Scope 2

Application
Sky (exclusive of other Comcast businesses) uses an internal price of carbon to help make decisions on the investments Sky makes in energy efficiency and on-site renewable energy in addition to standard simple pay back and Investment Rates of Returns (IRR). All investments reviewed in this way impact Sky's gross scope 1 and 2 emissions and investment in energy saving initiatives is embedded within the respective department budgets. Sky uses an internal price of carbon to help build a more robust business case for evaluation, particularly for the case of on-site renewable energy where simple pay back periods are typically longer than other business investments made. All business cases developed with an internal carbon price included are reviewed by the finance teams for sign-off.

Actual price(s) used (Currency /metric ton)
40

Variance of price(s) used
Sky uses carbon prices associated with the SECR and EU ETS with a variance of 25%. .

Type of internal carbon price
Shadow price

Impact & implication
Examples of where an internal carbon price has been used with impact is in the investment of on-site renewables at Sky's site in Osterley, West London, where Sky has invested in excess of £1.2m in LED lighting and solar PVs. Typically, simple pay backs for these on-site renewables would be between 6-11 years. To help the departments better evaluate this energy reduction project a price of carbon of £25/ton was applied (the carbon price used is subject to vary as carbon prices change).

C12. Engagement

C12.1

(C12.1) Do you engage with your value chain on climate-related issues?
Yes, our suppliers
Yes, our customers
Yes, other partners in the value chain

C12.1a

(C12.1a) Provide details of your climate-related supplier engagement strategy.

Type of engagement
Innovation & collaboration (changing markets)

Details of engagement
Run a campaign to encourage innovation to reduce climate impacts on products and services

% of suppliers by number
0.3

% total procurement spend (direct and indirect)
9

% of supplier-related Scope 3 emissions as reported in C6.5

Rationale for the coverage of your engagement
A portion of the spend and environmental impact at Comcast Cable is related to Residential Customer Premise Equipment (CPE) which requires electricity for power in customers' homes. Comcast Cable has invited relevant CPE suppliers to participate in two Voluntary Agreements: The Set-top Box Voluntary Agreement and Small Network Equipment Voluntary Agreement, both hosted by The Internet & Television Association and CableLabs. The mission of the Voluntary Agreements is to improve the energy efficiency of set-top-boxes and small network equipment. Comcast Cable works with these suppliers to implement best practices, procure sustainable goods, and ultimately create products that decrease the energy consumption of customer equipment. The rational for the coverage of this engagement is that it covers all residential CPE suppliers, which are the suppliers relevant for this engagement. While this represents < 1% of all Comcast Cable suppliers based on the size of our total operations, it is inclusive of all suppliers of the equipment which this initiative is focused on.

Impact of engagement, including measures of success
Energy consumed as a result of our residential customers using our products are sources of our Scope 3 carbon emissions. As a result, the Comcast Cable's technology team works with vendors to source efficient and low-carbon alternative CPE. Our technology team has collaborated with the respective set-top-box suppliers to create new set top box models that meet the standards set in the Set Top Box Voluntary Agreement. The success of this engagement is measured by the amount of energy savings we enable through our clients' use of our CPE. We measure these energy savings annually. For example, the average energy usage of broadband modems has decreased by 71% from 2015 to 2020.

Comment

C12.1b

(C12.1b) Give details of your climate-related engagement strategy with your customers.

Type of engagement
Collaboration & innovation

Details of engagement
Run a campaign to encourage innovation to reduce climate change impacts

% of customers by number
35

% of customer - related Scope 3 emissions as reported in C6.5

Portfolio coverage (total or outstanding)
<Not Applicable>

Please explain the rationale for selecting this group of customers and scope of engagement
Residential customers have the option to reduce their carbon footprint throughout numerous points in the customer journey, beginning with how they acquire the service equipment. By opting to use a self-installation kit to initiate service, new customers eliminate the need for a professional technician to drive to their home to install their new services - reducing the emissions from mobile combustion and saving money. Customers who opt for self-installation are not charged the pro-installation fees, giving them a financial incentive to choose this more convenient and environmentally friendly option. This opportunity is made available to residential customers setting up new services where it is technically possible for them to do a self-install (which is the majority of new customers). Therefore, the % of customers engaged is calculated as the total number of new install connects per year divided by the total number of residential customer relationships.

Impact of engagement, including measures of success
The impact of engagement is measured by tracking the percentage of new residential customers that opt to self-install their equipment. The measure of success is for the self-install opt-in rate to meet or beat the budget target for the year. While the specific opt-in rate for self-installations is confidential, we constantly measure and set targets for this rate, including as part of our annual budget and LRP process.

C12.1d

(C12.1d) Give details of your climate-related engagement strategy with other partners in the value chain.

As we continue to strive to improve the energy efficiency of Comcast Cable products, we have partnered closely with one of our manufacturers that provides a critical hardware component within our set top boxes. Broadcom Inc. is a US-based manufacturer of the semiconductors used in our set top box technology and is not a direct supplier. Case Study: as a signatory of

the set top box voluntary agreement (VA), Comcast Cable pledged that ≥ 90% of set top boxes purchased in 2020 would meet the Tier 3 efficiency levels outlined in the VA. In order to accomplish this goal, it was crucial for us to collaborate with other partners in the value chain, such as Broadcom, to meet this quota. We leveraged the expertise of leaders from both Comcast Cable and Broadcom to create a solution to meet the Tier 3 efficiency levels. As a result of this collaborative effort, Broadcom has created an innovative system-on-chip (SOC) device that is expected to become the world's first production silicon to be developed using the DOCSIS 4.0 Full Duplex standard. This important breakthrough allows us to deploy set top boxes that meet the rigorous energy efficiency levels outlined in the VA. Carbon emission savings of these set top boxes will also be tracked and reported annually. Furthermore, this solution increases the efficiency of existing infrastructure without the need for massive construction projects and accompanying incremental emissions.

C12.3

(C12.3) Do you engage in activities that could either directly or indirectly influence public policy on climate-related issues through any of the following?

Trade associations

C12.3b

(C12.3b) Are you on the board of any trade associations or do you provide funding beyond membership?

Yes

C12.3c

(C12.3c) Enter the details of those trade associations that are likely to take a position on climate change legislation.

Trade association

Society of Cable Television Engineers (SCTE)

Is your position on climate change consistent with theirs?

Consistent

Please explain the trade association's position

The SCTE Energy Management Program developed Energy 2020 to provide cable system operators with the energy management standards, technology innovation, organizational

solutions and training that look to help the cable industry meet Energy 2020's goals. Energy 2020 leads the industry's work with current and future partners to ensure power reliability, availability and performance for new services in a sustainable way. Comcast Cable is taking a strategic leadership and active participation role with Energy 2020.

How have you influenced, or are you attempting to influence their position?

Goals of Energy 2020 include reducing power consumption by 20% on a per unit basis, cutting energy costs by 25% on a per unit basis, and reducing grid dependency by 5%. Comcast helps lead Energy 2020 by participating in a number of committees and sub-committees. Comcast Cable Chairs or Co-Chairs participate in the Energy Management Subcommittee Energy 2020 program and numerous Energy 2020 Working Groups. Each Working Group provides a forum for companies, researchers, and vendors to work in collaboration to guide our industry toward energy savings and efficiency goals. To meet the objectives of this program, a resource toolkit has been developed to highlight energy standards, case studies, and other educational resources.

Trade association

NCTA - The Internet & Television Association

Is your position on climate change consistent with theirs?

Consistent

Please explain the trade association's position

As Americans increasingly rely on more electronic devices and gadgets throughout their daily lives, managing energy consumption has become both an environmental and economic priority. To address these challenges, cable companies are implementing several new initiatives that are decreasing their energy footprint in consumer homes. Energy efficient set-top boxes, low-power adapters, applications, cloud-based delivery services, and a number of other new technologies are some of the efforts that are providing a more energy efficient video experience. The complex Internet and video ecosystem consists of many moving parts, including operators, programmers, equipment manufacturers, research labs and more. Each of these major stakeholders is playing a role in delivering a more energy efficient experience that is saving consumers millions of dollars in energy bills and preventing millions of metric tons of carbon dioxide emissions. NCTA partners not only with primary stakeholders in the pay-TV environment, but also leading energy efficiency advocates such as, the Natural Resources Defense Council and the American Council for an Energy-Efficient Economy. Together, these participants have developed and implemented two VA dedicated to increasing energy efficiency of customer equipment. Lastly, the NCTA periodically engages with the Department of Energy and the California Energy Commission to discuss the VAs.

How have you influenced, or are you attempting to influence their position?

Comcast Cable has been a leading member of a voluntary agreement (VA) that was established in 2012 to improve energy efficiency of set-top boxes (STBs). The VA has now been extended to 2025, and many of its STBs are already compliant with the highest standard, driving energy consumption down, and customer savings up. Comcast Cable estimates that customers in 2020 saved more than 4.3 TWh of energy (~3 million metric tons of CO2E) and $569 million due to improvements in energy efficiency of its STBs, and nearly

$2.5 billion and 19 TWh of energy (~13.4 million metric tons CO2E) since the agreement began. In addition to improving STBs, Comcast Cable has also innovated through a separate voluntary agreement to improve energy efficiency in small network equipment (SNE), including broadband modems, integrated access devices, and local network equipment. Additionally, Comcast has recently collaborated with the Energy Advocates to establish the Tier 4 energy efficiency levels of the Set Top Box VA. As we continue our ongoing partnership with the VA, we strive for the continuous improvement of energy efficient equipment.

Trade association

CableLabs

Is your position on climate change consistent with theirs?

Consistent

Please explain the trade association's position

At the end of 2014, the U.S. Department of Energy, along with representatives from the pay TV industry and energy efficiency advocates, announced that the Energy Department has endorsed the set-top box (STB) voluntary agreement (VA). In June 2015, the industry also announced a new small network equipment (SNE) VA, modeled after the successful STB VA. Integrated Access Device energy efficiency (energy usage weighted by average broadband speeds) improved by 70% over the life of the SNE VA since 2015. CableLabs supported the efforts that led up to both agreements and is actively involved in its implementation. CableLabs is committed to helping cable operators and manufacturers design and deploy more energy-efficient consumer premises equipment. They have working groups that meet regularly with members and vendors to address many energy management initiatives, including international efforts.

How have you influenced, or are you attempting to influence their position?

Comcast Cable has been a leading member of a voluntary agreement (VA) that was established in 2012 to improve energy efficiency of set-top boxes (STBs). The VA has now been extended to 2025, and many of its STBs are already compliant with the highest standard, driving energy consumption down, and customer savings up. Comcast Cable estimates that customers in 2020 saved more than 4.3 TWh of energy (~3 million metric tons of CO2E) and $569 million due to improvements in energy efficiency of its STBs, and nearly $2.5 billion and 19 TWh of energy (~13.4 million metric tons CO2E) since the agreement began. In addition to improving STBs, Comcast Cable has also innovated through a separate voluntary agreement to improve energy efficiency in small network equipment (SNE), including broadband modems, integrated access devices, and local network equipment. Additionally, Comcast has recently collaborated with the Energy Advocates to establish the Tier 4 energy efficiency levels of the Set Top Box VA. As we continue our ongoing partnership with the VA, we strive for the continuous improvement of energy efficient equipment.

C12.3f

(C12.3f) What processes do you have in place to ensure that all of your direct and indirect activities that influence policy are consistent with your overall climate change strategy?

The primary responsibility for implementing Comcast's political, lobbying and trade association activities in the United States rests with its Government Affairs organization, which ultimately reports to Comcast's Chief Legal Officer. These activities, undertaken directly or through participation in trade associations, are directed toward influencing the wide variety of public policy issues that impact our businesses. To that end, we have a set of criteria that guide political contributions, lobbying positions and memberships in trade associations, including that Comcast is prohibited from making independent expenditures, contributing to political committees that only make independent expenditures (so-called “SuperPACs”) or contributing to any organization for the purpose of funding independent expenditures. We also have approval processes involving senior management to approve such contributions or trade association memberships. While Comcast’s participation in trade associations comes with the understanding that we might not always agree with every position held by the organization or its other members, we do consider whether such position is significantly inconsistent with any of our material and core public policy issues. If we deem such inconsistency to present a material risk to our company, we will engage with the organization.

C12.4

(C12.4) Have you published information about your organization’s response to climate change and GHG emissions performance for this reporting year in places other than in your CDP response? If so, please attach the publication(s).

Publication
In voluntary sustainability report

Status
Complete

Attach the document
2020 Comcast Impact Report.pdf

Page/Section reference
Report in entirety reflects Comcast's ESG Impact, and pages 61-76 are specific to Climate.

Content elements
Strategy
Risks & opportunities
Emissions figures
Emission targets
Other metrics

Comment

Publication
In voluntary sustainability report

Status
Complete

Attach the document
2020 Comcast Carbon Footprint Report.pdf

Page/Section reference
Report in entirety reflects Comcast's Scope 1 and 2 Emissions footprint.

Content elements
Emissions figures
Emission targets

Comment

Publication
In voluntary sustainability report

Status
Complete

Attach the document
2020 Comcast SASB Report.pdf

Page/Section reference
Report in entirety reflects Comcast's SASB report, and pages 1, 2, and 6 are specific to Climate.

Content elements
Strategy
Risks & opportunities
Emissions figures
Emission targets
Other metrics

Comment

C15. Signoff

C-FI

(C-FI) Use this field to provide any additional information or context that you feel is relevant to your organization's response. Please note that this field is optional and is not scored.

Please note the response and corresponding attachments to questions in section C10 regarding verification of reported emissions solely pertain to Sky's reported emissions and not to the company-wide reported emissions.

C15.1

(C15.1) Provide details for the person that has signed off (approved) your CDP climate change response.

	Job title	Corresponding job category
Row 1	Vice President, Strategy	Other, please specify (Vice President)