

Understanding our sources of GHG emissions

Charter accounts for GHG emissions in both our operations and value chain in line with the concepts of “scope” defined in the GHG Protocol.

- ▶ **Scope 1:** Direct emissions produced from assets Charter owns or controls, namely from fleet, natural gas, corporate-owned aircraft, and fugitive emissions from our fire suppression systems
- ▶ **Scope 2:** Indirect emissions from electricity and steam purchased by Charter
- ▶ **Scope 3:** Select other indirect emissions produced upstream and downstream of Charter’s operations, namely corporate air travel, material energy, and energy use for various devices – STBs, SNE, and mobile devices that are either owned or controlled by our customers

Since completing our first GHG baseline assessment of our 2019 emissions, we have completed additional years of GHG inventories for 2020 and 2021. This multiyear view provides trending insights, tracks progress, and focuses our efforts to achieve our carbon neutral goal.

MT CO ₂ e ¹⁴	2021	2020	2019
Fleet	327,462	351,863	379,285
Other Operational Emissions	48,247	45,712	46,875
Scope 1 Total	375,709	397,575	426,160
Electricity ¹⁵	1,057,823	1,076,974	1,191,163
Scope 2 Total	1,057,823	1,076,974	1,191,163
Scope 1 and 2 Total	1,433,532	1,474,549	1,617,323
STB and SNE ¹⁶	926,838	950,000	888,874
Mobile	78,111	62,220	25,848
Corporate Air Travel	2,834	2,450	10,170
Scope 3 Total	1,007,783	1,014,670	924,892

Our scopes 1 and 2 emissions, which are part of our goal to be carbon neutral in our operations, have decreased over 11% since our baseline year of 2019. Charter’s scope 1 Fleet emissions continue to decrease approximately 7% annually due in part to initiatives to reduce truck rolls, as well as increased vehicle fuel efficiencies. Our scope 2 emissions have been decreasing each year – 11% since 2019 and 2% since 2020 – in part because of our application of updated U.S. EPA eGRID emissions factors each year, which improve with increasing availability of clean, renewable energy on the grid. Additionally, our underlying electricity consumption decreased approximately 2% since our baseline reporting year of 2019 in part due to lower electricity use in our operations during the COVID-19 pandemic. We expect electricity consumption for the coming years to increase relative to the 2019 baseline with the growth in our business including enhancements to our network like the buildout of markets related to the Citizens Broadband Radio Service (“CBRS”) spectrum auction and expansion from the rural construction initiative.

Our overall scope 3 value chain emissions increased 9% since our baseline year of 2019 due to the increased customer demand for Internet services and the growth of our Spectrum Mobile business. When accounting for the SNE and STB emissions, the energy efficiency reductions with the Voluntary Agreements and fewer purchases of STBs by Charter are offset by a consistent increase in total volume of purchased modems and routers. Energy use emissions from both STB and SNE experience the same proportional and passive emissions reductions associated with the greening of the grid as our scope 2 electricity emissions.



¹⁴ Metric tons of carbon dioxide equivalent (“MT CO₂e”), representing the number of metric tons of carbon dioxide emissions with the same global warming potential as one metric ton of another GHG. GHG accounted for across the inventory include: carbon dioxide (“CO₂”), methane (“CH₄”), nitrous oxide (“N₂O”), and hydrofluorocarbons (“HFCs”). Scope 1 Other Operational Emissions includes 0.45 metric tons of CO₂e from fluorinated ketones. Charter calculates GHG emissions using carbon dioxide equivalents or “CO₂e” methodology from reputable sources, including the U.S. EPA Emissions Factor Hub and U.S. EPA Emissions & Generation Resource Integrated Database (“eGRID”).

¹⁵ Scope 2 electricity includes a small amount of steam, 735 in 2020 and 741 in 2021.

¹⁶ Includes energy use and material energy from STBs and SNE purchased within the corresponding year, consistent with what we report in the Energy Efficiency Voluntary Agreements. Annual calculations do not include energy use or material energy from legacy STBs and SNE previously purchased.