Environmental Metrics

For all environmental metrics, we apply an operational control boundary. We used the methodology outlined in the World Resource Institute (WRI) and the World Business Council for Sustainable Development's (WBCSD) GHG Protocol: A Corporate Accounting and Reporting Standard (Revised Edition) and WRI/WBSCD GHG Protocol Scope 2 Guidance – an amendment to the GHG Protocol Corporate Standard to calculate Scope 1 and 2 emissions generated by our global facilities.

Through this assessment, we measured the GHG emissions associated with natural gas, diesel fuels, kerosene and liquefied petroleum gas (LPG) we utilize for heating and cooling our facilities and for our backup generators, as well as the refrigerants and PFCs used in our manufacturing, offices and equipment over which we have operational control. In addition, we measured the electricity we purchase to power our facilities (Scope 2 location-based method). GHG emissions are reported in metric tonnes of CO_2e (tCO_2e). Our energy consumption is limited to natural gas, diesel, kerosene, LPG and electricity use. We calculate energy and emissions based on actual data when available. When actual consumption data is not available, we estimate utilizing square footage intensity factors by facility type.

The following tables summarize our fuel and energy consumption and our GHG emissions for global facilities in 2021, as well as for facilities in the U.S. for both 2020 and 2021.

FUEL AND ENERGY CONSUMPTION (kWh)

	GLOBAL FACILITIES	U.S. FACILITIES	
	2021	2021	2020
Electricity	348,301,781	254,249,911	292,466,322
Natural Gas	143,900,326	130,271,957	122,390,854[1]
Other fuels[2]	1,214,372	250,908	266,223
Total Energy consumption	**493,416,480**	**384,772,776**	**415,123,400**
Total Energy per million dollars of revenue	**17,975 kWh/$M**		

[1] Historical data and associated Scope 1 emissions have been restated due to improvements in data collection methodologies.

[2] Other fuels include diesel fuel, LPG and kerosene.

GREENHOUSE GAS EMISSIONS (tCO_2e)

	GLOBAL FACILITIES	U.S. FACILITIES	
	2021	2021	2020
Scope 1 Emissions[1]			
PFCs and process gas	98,073	97,930	90,029
Natural Gas	26,080	23,610	22,182
Refrigerants	3,252	2,065	1,818
Other fuels	309	64	68
Total Scope 1	**127,714**	**123,669**	**114,096**
Scope 2 Emissions			
Total Scope 2 (Location-based method)[2]	164,600	109,702	128,076
Total Scope 1 & 2 (Location-based method)	**292,314**	**233,371**	**242,172**
Total Scope 2 (Market-based method)[3]	164,692	**Market-based Scope 2 emissions were first calculated in 2021**	
Total Scope 1 & 2 (Market-based method)[4]	**292,406**		
Total Emissions per million dollars of revenue	**10.6 tCO_2e/$M**		

[1] Emission factors used in Scope 1 emissions calculations include U.S. EPA Climate Leaders, Emissions Factors for Greenhouse Gas Inventories (April 2021).

[2] Emission factors used in Scope 2 location-based method calculations include U.S. EPA's Emissions & Generation Resource Integrated Database (eGRID), 2019, IEA Statistics Data Service: Emission Factors (September 2020).

[3] Emission factors used in Scope 2 market-based method calculations include U.S. EPA's Emissions & Generation Resource Integrated Database (eGRID), 2019, IEA Statistics Data Service: Emission Factors (September 2020) and EU Residual Mix factors.

[4] Broadcom follows the hierarchy outlined in Table 6.3 of the WRI/WBSCD GHG Protocol Scope 2 Guidance for selecting appropriate emission factors for Scope 2 market-based method. Emission factors used in Scope 2 market-based calculations include Association of Issuing Bodies: European Residual Mixes 2019 (August 2020) and applicable factors used in the location-based method.