

## GHG Emissions Reporting Standards

Verizon uses generally accepted accounting standards for tracking and reporting our greenhouse gas inventory. We report our emissions based on a calendar year for all sources of emissions. We define our Scope 1 and Scope 2 emissions reporting in accordance with *The Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard*.

- Scope 1 – All direct sources of emissions owned or controlled by Verizon, with the main categories being fuel to power our fleet, heat our buildings and power our back-up generators.
- Scope 2 – Indirect emissions sources generated off-site, but purchased by Verizon. The main category is electricity to power our networks and data centers, plus a small amount of steam and heat purchased to heat our buildings.

For Scope 3 emissions we use *The GHG Protocol Corporate Value Chain (Scope 3) Accounting and Reporting Standard*.

- Scope 3 – Verizon reports employee business travel by air and rail.

## Calculation Methodology

### Sources of Emissions Factors

We use the following emissions factors:

#### Scope 1

Methodology:

- The Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard Revised Edition by the World Resources Institute (WRI)/World Business Council for Sustainable Development (WBCSD)
- US Environmental Protection Agency (EPA) 2008 Climate Leaders Greenhouse Gas Reporting Protocol: Direct Emissions from Stationary and Mobile Combustion Sources
- Intergovernmental Panel on Climate Change (IPCC) Fourth Assessment Report (2007)

Emissions Factors:

- US EPA 2013 Revisions to the Greenhouse Gas Reporting Rule: 40 CFR Part 98 Subpart C, Tables C-1 and C-2 (released November 29, 2013)
- US Energy Information Agency (EIA) Voluntary Reporting of Greenhouse Gases Form EIA-1605, Appendix H: Fuel Emissions Factors (November 2010)
- WRI GHG Protocol Emission Factor from Cross Sector Tools (August 2012), Table 11: CH<sub>4</sub> and N<sub>2</sub>O Emission Factors by Fuel

## Scope 2:

### Methodology:

- The Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard Revised Edition by the World Resources Institute (WRI)/World Business Council for Sustainable Development (WBCSD)
- US Environmental Protection Agency (EPA) 2008 Climate Leaders Greenhouse Gas Reporting Protocol: Indirect Emissions from Purchases/Sales of Electricity and Steam
- The Climate Registry General Reporting Protocol, Version 2.0, March 2013
- Intergovernmental Panel on Climate Change (IPCC) Fourth Assessment Report (2007)

### Emissions Factors:

- US EPA 2010 Emissions and Generation Resource Integrated Database (eGRID) (released February 24, 2014)
- International Energy Agency (IEA) 2013 CO<sub>2</sub> Emissions from Fuel Combustion Highlights Report, "CO<sub>2</sub> emissions per kWh from electricity generation" Table (released 2013)
- US Energy Information Agency (EIA) Voluntary Reporting of Greenhouse Gases Form EIA-1605, Appendix N: Emission Factors for Steam and Chilled/Hot Water (November 18, 2010)

## Scope 3

### Methodology:

- The Corporate Value Chain (Scope 3) Accounting and Reporting Standard: Supplement to the GHG Protocol Corporate Accounting Standard, by the World Resources Institute (WRI)/World Business Council for Sustainable Development (WBCSD)
- Intergovernmental Panel on Climate Change (IPCC) Fourth Assessment Report (2007)

### Emissions Factors:

- UK Department for Environment Food & Rural Affairs (DEFRA) 2012 greenhouse gas conversion factors for company reporting (released 2013)

## Data Collection and Estimations

100 percent of our energy usage data is not available for us to meet our March reporting deadline.

Actual usage data is available to calculate 94 percent of our emissions profile. For the remaining six percent, we employ two estimation processes:

1. Electricity usage for facilities without actual metered reading or utility bills we estimate based on the U.S. EPA 2008 Climate Leaders Greenhouse Gas Reporting Protocol: Indirect Emissions from Purchases/Sales of Electricity and Steam.
2. For electricity and natural gas usage where full December data is not available, we use a five-year rolling average for the percent of annual emissions data that December represents. We estimate only the additional emissions not directly accounted for based on our reporting deadline.