

## Carbon Emissions and Intensity

Year	Scope 1 (Gross MWh) (Includes CO <sub>2</sub> , N <sub>2</sub> O and CH <sub>4</sub> ): Metric Tonnes of CO <sub>2</sub> e	Scope 1 (Fleet Vehicles): Metric Tonnes of CO <sub>2</sub> e	Scope 1 (Small Plant Stationary Fuel Combustion Sources not included in Stack Emissions): Metric Tonnes of CO <sub>2</sub> e	Scope 1 (Plant Mobile Equipment) Metric Tonnes of CO <sub>2</sub> e	Scope 1 (Gas Operations): Metric Tonnes of CO <sub>2</sub> e	Scope 1 (Electric Substation and Distribution SF6): Metric Tonnes of CO <sub>2</sub> e	Scope 2 (Purchased Power Net of Wholesale): (MWh)	Scope 2 (Purchased Power Net of Wholesale): Metric Tonnes of CO <sub>2</sub> e	Scope 2 (Electricity Use in Buildings): Metric Tonnes of CO <sub>2</sub> e	Scope 2 (Gas Use in Buildings)*: Metric Tonnes of CO <sub>2</sub> e	Scope 3 (Electricity Purchased for End Use Customers): (MWh)	Scope 3 (Electricity Purchased for End Use Customers): Metric Tonnes of CO <sub>2</sub> e	Scope 3 (Gas Purchased for End Use Customers): MMCUFT	Scope 3 (Gas Purchased for End Use Customers): Metric Tonnes of CO <sub>2</sub> e	Total Goal Related Emissions: Metric Tonnes of CO <sub>2</sub> e	USD Million Sales (in millions)	Carbon Intensity Calculation <sup>1</sup> (CO <sub>2</sub> e/ Revenue)	Owned Net Generation (MWh) <sup>3</sup>	Gross Generation Carbon Intensity by Net MWh Calculation <sup>5</sup> (CO <sub>2</sub> e/Net Generation)
Goal <sup>2</sup>	✓	✓	✓	✓		✓		✓	✓	✓									
2010	60,736,086***	48,343***	2,515	4,893*			114,727**	1,906,442	1,597,157	89,732*	18,250*	15,980,340	7,263,132	44,546	2,389,400	62,577,296			
2014	33,212,770	50,469*	3,209	4,893*	30,419	131,230	520,845	451,533	71,016*	18,378*	8,949,034	4,497,655	49,079	2,533,521	33,909,091	\$7,852	0.00432	34,852,836	0.95
2015	30,199,495	49,727*	5,610	4,893*	35,622	86,940	482,359	395,828	70,472*	18,326*	9,082,309	4,177,384	44,835	2,304,800	30,796,883	\$7,669	0.00402	33,880,343	0.89
2016	28,737,028	46,633*	32,645	4,893*	35,376	85,195	619,191	558,092	67,022*	18,311*	9,272,725	4,172,432	43,287	2,225,952	29,515,412	\$7,517	0.00393	33,968,857	0.85
2017	28,407,677	47,630	8,984	4,893	28,132	90,107	530,829	470,110	69,781	18,311	9,134,536	4,110,251	40,656	2,034,406	29,083,085	\$7,447	0.00391	32,704,089	0.87
2018	29,480,129	43,256	1,097	6,459	29,040	58,442	273,821	241,199	67,316	20,058	10,263,461	4,415,253	46,474	2,267,656	29,882,337	\$7,785	0.00384	34,546,832	0.85

<sup>1</sup> Total CO<sub>2</sub>e excluding Scope 3 purchased power/gas and gas operations.

<sup>2</sup> Our CO<sub>2</sub> Goal includes columns identified with a checkmark.

<sup>3</sup> Net Generation data excludes Purchased Power. Reflects 75% Trimble County Unit 1 & 2 ownership.

<sup>4</sup> Note: There is not a material difference in the conversion formulas utilized in our U.K. Operations (DECC Conversion Factor) vs. our Kentucky Operations (EIA's Conversion Factor).

<sup>5</sup> Total CO<sub>2</sub>e associated with gross generation divided by net generation.

\* Estimated data for Kentucky Operations.

\*\* Estimated data for Pennsylvania Operations.

\*\*\* 2010 Scope 1 Plant Emissions is the only data point that includes PPL Energy Supply, LLC.

## Emissions

Year	Owned Net Generation (MWh) <sup>1</sup>	Total NOx Emissions (Metric Tonnes)	Total NOx Emissions Intensity (Metric Tonnes / Owned Net MWh)	Total SO <sub>2</sub> Emissions (Metric Tonnes)	Total SO <sub>2</sub> Emissions Intensity (Metric Tonnes / Owned Net MWh)	Hazardous Air Pollutants (Total HG Emissions) (Kg)	Hazardous Air Pollutants Intensity (Total HG Emissions (Kg) / Owned Net MWh)	Particulate Matter (Metric Tonnes)
2014	34,852,836	31,644	0.00091	70,697	0.00203	*	*	4,209
2015	33,880,343	22,365	0.00066	40,075	0.00118	230	6.79E-06	4,168
2016	33,968,857	18,380	0.00054	16,398	0.00048	70	2.06E-06	2,634
2017	32,704,879	15,710	0.00048	13,499	0.00041	77	2.35E-06	1,900
2018	34,546,832	17,329	0.00050	16,698	0.00048	71	2.06E-06	2,241

<sup>1</sup> Net Generation data excludes purchased power. Reflects 75 percent Trimble County Unit 1&2 ownership.

\*Reporting began in 2015

