

Carbon Emissions and Intensity

Year	Scope 1: Gross MWh of Owned Generation Includes CO ₂ , N ₂ O and CH ₄ (metric tonnes of CO ₂ e)	Scope 1: Fleet Vehicles (metric tonnes of CO ₂ e)	Scope 1: Small Plant Stationary Fuel Combustion Sources not included in Stack Emissions (metric tonnes of CO ₂ e)	Scope 1: Plant Mobile Equipment (metric tonnes of CO ₂ e)	Scope 1: Gas Operations (metric tonnes of CO ₂ e)	Scope 1: Electric Substation and Distribution SF ₆ (metric tonnes of CO ₂ e)	Scope 2: Purchased Power Net of Wholesale (MWh)	Scope 2: Purchased Power Net of Wholesale (metric tonnes of CO ₂ e)	Scope 2: Electricity Use in Buildings (metric tonnes of CO ₂ e)	Scope 2: Gas Use in Buildings ² (metric tonnes of CO ₂ e)	Scope 3: Electricity Purchased for End Use Customers (MWh)	Scope 3: Electricity Purchased for End Use Customers (metric tonnes of CO ₂ e)	Scope 3: Gas Purchased for End Use Customers (MMCUFT)	Scope 3: Gas Purchased for End Use Customers (metric tonnes of CO ₂ e)	Total Goal Related Emissions (metric tonnes of CO ₂ e)	USD Million Sales (in millions)	Revenue Carbon Intensity ³ (CO ₂ e/revenue)	Owned Net Generation ⁴ (MWh)	Gross Generation Carbon Intensity ⁵ (CO ₂ e/net MWh)
Goal ¹	✓	✓	✓	✓		✓		✓	✓	✓									
2010	60,736,086 ^A	48,343 ^{B,C}	2,515	4,893 ^B		114,727 ^C	1,906,442	1,597,157	89,732 ^B	18,250 ^B	15,980,340	7,263,132	44,546	2,389,400	62,577,296				
2015	30,199,495	49,727 ^B	5,610	4,893 ^B	35,622	86,940	482,359	395,828	70,472 ^B	18,326 ^B	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 ^B	32,645	4,893 ^B	35,376	85,195	619,191	558,092	67,022 ^B	18,311 ^B	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	49,513 ^E	273,821	241,199	67,316	20,058	10,263,461	4,415,253	46,474	2,267,656	29,873,408	\$7,785	0.00384	34,546,832	0.85
2019	26,740,576	46,646 ^D	4,056	5,898	27,909	26,556	594,506	532,952	30,646 ^F	17,914	10,884,062	4,383,993	45,182	2,230,727	27,405,245	\$7,769	0.00353	32,282,872	0.83

¹ Our CO₂e Goal includes columns identified with a checkmark.

² 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).

³ Total CO₂e goal-related emissions.

⁴ Net Generation data excludes purchased power. Includes 75% Trimble County Unit 1 & 2 ownership.

⁵ Total CO₂e associated with gross owned generation divided by net generation.

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

^B Estimated data for Kentucky Operations.

^C Estimated data for Pennsylvania Operations.

^D 2019 utilizes enhanced data collection as compared to previous years.

^E 2018 data updated to reflect the WPD Environment & Innovation Report.

^F LG&E-KU's emissions captured in Scope 1 Gross MWh.

Other Air Emissions

Year	Owned Net Generation ¹ (MWh)	Total NOx Emissions (metric tonnes)	Total NOx Emissions Intensity (metric tonnes/owned net MWh)	Total SO ₂ Emissions (metric tonnes)	Total SO ₂ Emissions Intensity (metric tonnes/owned net MWh)	Total HG Emissions (kg)	Total HG Emissions Intensity (kg/owned net MWh)	Particulate Matter (metric tonnes)
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
2019	32,282,872	14,633	0.00045	13,487	0.00042	55	1.70E-06	1,653

¹ Net Generation data excludes Purchased Power. Includes 75% Trimble County Unit 1 & 2 ownership.