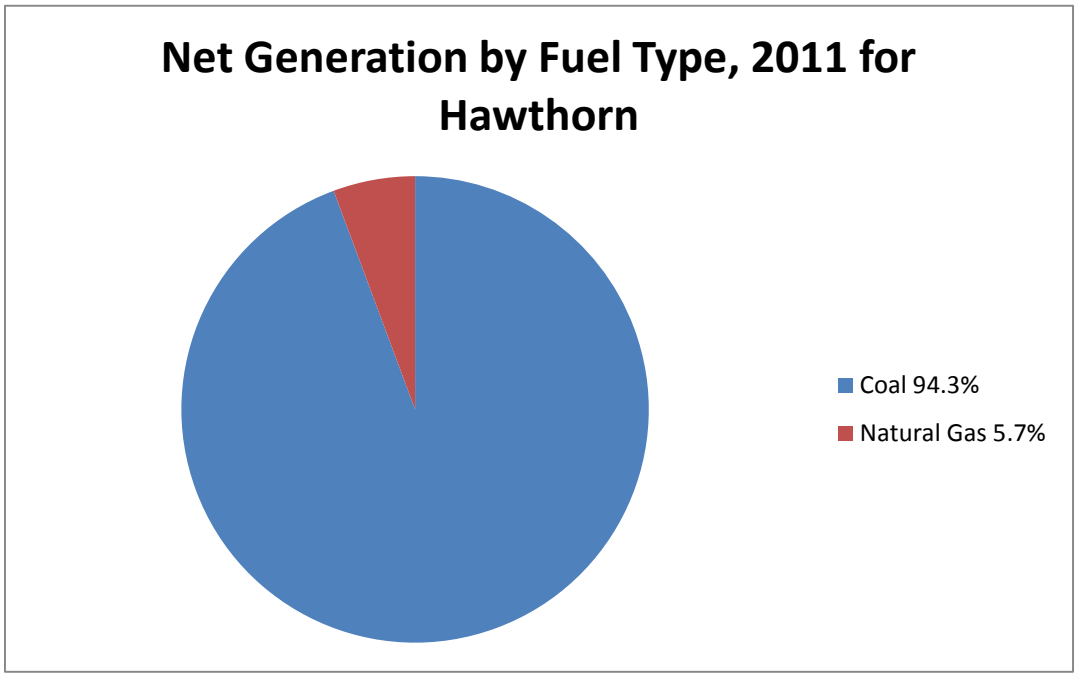
Missouri Department of Natural Resources

Kansas City Power & Light Company
Power Plant Name: Hawthorn
Electric Generation and Emissions in 2011

Generation Tables

	Fuel Consumption, MMBTUs	Percent of Total		Net Electric Power Generated, MWh	Percent of Total	
Non-renewable sources						
Coal	38,580,425	94.9%	94.9%	3,759,752	94.3%	94.3%
Natural Gas	2,073,225	5.1%	5.1%	225,844	5.7%	5.7%
Petroleum						
Nuclear						
Other						
Non-renewable total	**40,653,650**	**100.0%**	**100.0%**	**3,985,596**	**100.0%**	**100.0%**
Renewable sources						
Biomass						
Hydroelectric						
Landfill Gas						
Solar						
Waste Fuels						
Wind						
Wood						
Renewable total						
Grand total	**40,653,650**		**100.0%**	**3,985,596**		**100.0%**

Fuel Type	Physical Units	Number of Units
Sub-bituminous Coal	Short Tons	2,238,696
Natural Gas	MCf	2,073,225


Net Generation by Fuel Type, 2011 for Hawthorn
Coal 94.3%
Natural Gas 5.7%

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Power Plant Nameplate information for Hawthorn

Plant Name	County Location	Generator	Generator Type	Generator Status	Nameplate Capacity (MW)
Hawthorn		*All Operating Generators*			*4,281.2*
Hawthorn	Jackson	9	Combined Cycle Steam Part	Operating - in service	584.0
Hawthorn	Jackson	6	Combined Cycle Combustion Turbine Part (type of coal or solid must be reported as energy source for integrated coal gasification).	Operating - in service	704.0
Hawthorn	Jackson	7	Combustion (Gas) Turbine (includes jet engine design)	Operating - in service	308.0
Hawthorn	Jackson	8	Combustion (Gas) Turbine (includes jet engine design)	Operating - in service	308.0
Hawthorn	Jackson	5	Steam Turbine, including nuclear, geothermal and solar steam (does not include combined cycle)	Operating - in service	2,377.2

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Emissions from Electricity Generated in 2011: Hawthorn

	CO2 Equivalent (TONS)	Carbon Dioxide (CO2) (TONS)	Methane (CH4) (TONS)	Nitrogen Dioxide (NO2) (TONS)
Hawthorn	141,134,357	16,988,781	1,880,355	273,091

	Sulfur Dioxide (SO2) (TONS)	Annual Nitrogen Oxide (NOx) (TONS)	Summer Nitrogen Oxide (NOx) (TONS)
Hawthorn	30,567	0.0010	0.0010

Identified Flue Gas Desulfurization (FGD) controls installed on Hawthorn power plant

Plant	Control Equipment	Sorbent Type
Hawthorn	Spray dryer type	Lime and alkaline fly ash

Identified Flue Gas Particulate (FGP) controls installed on Hawthorn power plant

Plant	Control Equipment
Hawthorn	Baghouse, pulse

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Notes:
Generation, emissions and pollution control data include power plants owned by the utility and located in Missouri.

Emissions data calculated by Missouri Department of Natural Resources, Division of Energy, from EIA Fuel Consumption Data

Fuel Consumption and Generation Data from United States Energy Information Administration, Form 923, United States Department of Energy
http://www.eia.gov/electricity/data/eia923

Pollution control data (FGD and FGP equipment) from United States Energy Information Administration, Form 860, United States Department of Energy
http://www.eia.gov/electricity/data/eia860/index.html

Emissions factors for fuel-based generation from United States Environmental Protection Agency "Emission Factors for Greenhouse Gas Inventories", November 7, 2011,
http://www.epa.gov/climateleadership/documents/emission-factors.pdf