



City of Columbia
Power Plant Name: Columbia
Electric Generation and Emissions in 2010

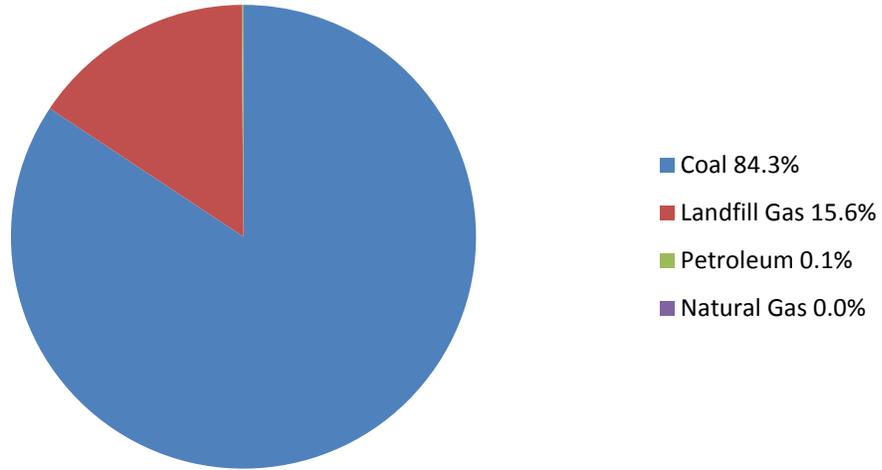
Generation Tables

| | Fuel Consumption, MMBTUs | Percent of Total | | Net Electric Power Generated, MWh | Percent of Total | |
|------------------------------|--------------------------|------------------|---------------|-----------------------------------|------------------|---------------|
| | | | | | | |
| Non-renewable sources | | | | | | |
| Coal | 966,825 | 99.8% | 85.2% | 69,379 | 99.9% | 84.3% |
| Natural Gas | 671 | 0.1% | 0.1% | 29 | 0.0% | 0.0% |
| Petroleum | 860 | 0.1% | 0.1% | 66 | 0.1% | 0.1% |
| Nuclear | | | | | | |
| Other | | | | | | |
| Non-renewable total | 968,356 | 100.0% | 85.4% | 69,474 | 100.0% | 84.4% |
| Renewable sources | | | | | | |
| Biomass | | | | | | |
| Hydroelectric | | | | | | |
| Landfill Gas | 165,807 | 100.0% | 14.6% | 12,802 | 100.0% | 15.6% |
| Solar | | | | | | |
| Waste Fuels | | | | | | |
| Wind | | | | | | |
| Wood | | | | | | |
| Renewable total | 165,807 | 100.0% | 14.6% | 12,802 | 100.0% | 15.6% |
| Grand total | 1,134,163 | | 100.0% | 82,276 | | 100.0% |

| Fuel Type | Physical Units | Number of Units |
|-------------------------------------|----------------|-----------------|
| Anthracite Coal and Bituminous Coal | Short Tons | 36,907 |
| Natural Gas | MCf | 838 |
| Distillate Fuel Oil | Barrels | 148 |
| Landfill Gas | MCf | 414,518 |



Net Generation by Fuel Type, 2010 for Columbia





Power Plant Nameplate information for Columbia

| Plant Name | County Location | Generator | Generator Type | Generator Status | Nameplate Capacity (MW) |
|-------------------|------------------------|---------------------------------|--|-------------------------|--------------------------------|
| <i>Columbia</i> | | <i>All Operating Generators</i> | | | 402.4 |
| Columbia | Boone | 6 | Combustion (Gas) Turbine (includes jet engine design) | Operating - in service | 50.0 |
| Columbia | Boone | DAN1 | Internal Combustion Engine (diesel, piston, reciprocating) | Operating - in service | 8.0 |
| Columbia | Boone | LF1 | Internal Combustion Engine (diesel, piston, reciprocating) | Operating - in service | 4.0 |
| Columbia | Boone | LF2 | Internal Combustion Engine (diesel, piston, reciprocating) | Operating - in service | 4.0 |
| Columbia | Boone | MBS1 | Internal Combustion Engine (diesel, piston, reciprocating) | Operating - in service | 4.0 |
| Columbia | Boone | MBS2 | Internal Combustion Engine (diesel, piston, reciprocating) | Operating - in service | 4.0 |
| Columbia | Boone | SF1 | Internal Combustion Engine (diesel, piston, reciprocating) | Operating - in service | 4.0 |
| Columbia | Boone | SF2 | Internal Combustion Engine (diesel, piston, reciprocating) | Operating - in service | 4.0 |
| Columbia | Boone | SH1 | Internal Combustion Engine (diesel, piston, reciprocating) | Operating - in service | 5.2 |
| Columbia | Boone | SH2 | Internal Combustion Engine (diesel, piston, | Operating - in service | 5.2 |



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| | | | | | |
|----------|-------|------|--|------------------------|-------|
| | | | reciprocating) | | |
| Columbia | Boone | WTP1 | Internal Combustion Engine (diesel, piston, reciprocating) | Operating - in service | 8.0 |
| Columbia | Boone | WTP2 | Internal Combustion Engine (diesel, piston, reciprocating) | Operating - in service | 8.0 |
| Columbia | Boone | 5 | Steam Turbine, including nuclear, geothermal and solar steam (does not include combined cycle) | Operating - in service | 66.0 |
| Columbia | Boone | 7 | Steam Turbine, including nuclear, geothermal and solar steam (does not include combined cycle) | Operating - in service | 88.0 |
| Columbia | Boone | 8 | Steam Turbine, including nuclear, geothermal and solar steam (does not include combined cycle) | Operating - in service | 140.0 |



Emissions from Electricity Generated in 2010: Columbia

| | CO2 Equivalent (TONS) | Carbon Dioxide (CO2) (TONS) | Methane (CH4) (TONS) | Nitrogen Dioxide (NO2) (TONS) |
|----------|--------------------------------------|--|-------------------------------------|--|
| Columbia | 3,728,845 | 436,663 | 49,246 | 7,284 |

| | Sulfur Dioxide (SO2) (TONS) | Annual Nitrogen Oxide (NOx) (TONS) | Summer Nitrogen Oxide (NOx) (TONS) |
|----------|--|---|---|
| Columbia | 1,805 | 0.0000 | 0.0000 |

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

| Plant | Control Equipment | Sorbent Type |
|--------------|---------------------------|---------------------|
| | No FGD Controls Installed | |

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

| Plant | Control Equipment |
|--------------|--------------------------|
| Columbia | Baghouse, reverse air |



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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>