Virginia

Direct Energy Business, LLC Fuel Mix

Power Sources

Sources of electricity for Direct Energy customers* who received 100% renewable power in the reporting period 1/1/2022 - 12/31/2022 was met by generation from the following sources.

***Excludes some eligible large commercial customers who chose to be served power that matched the PJM system mix.**

Source	Percentage of total
Municipal Solid Waste	24%
Water	71%
Wind	5%

Air Emissions

Carbon dioxide (CO_2) emission rate for the PJM region for Municipal Solid Waste, nitrogen oxides (NOX), and sulfur dioxide (SO_X) emission rates for Direct Energy Business, LLC.

Emissions

Emission Type	Lbs. per MWH
Carbon Dioxide	6.8113
Nitrogen Oxides	0.0123
Sulfur Dioxide	0.0029

The benchmark emission levels that are shown approximate the emission rate for all electricity generation in the PJM region. Data used to calculate the emission profile came from generator owner-entered values, EPA generator-specific emission factors based on 2004/2005 CEMS data, EPA plant emission factors from eGRID or fuel type default. CO is a “greenhouse gas” which may contribute to global climate change. SO and NOx released into the atmosphere react to form acid rain. Nitrogen Oxides also react to form ground level ozone, an unhealthful component of “smog.”

Direct Energy. Business

Virginia

PJM System-Wide Generation Fuel Mix

Power Sources

Sources of electricity for all Direct Energy customers in the reporting period 1/1/2022 - 12/31/2022 was met by generation from the following sources.

Sources of electricity supplied for the 12 months ending 12/31/2022.

Source	Percentage of total
Coal	20.1620
Oil	0.2171
Natural Gas	40.0680
Nuclear	32.7028
Hydro	0.9859
**Biomass*	0.0001
**Captured Methane Gas*	0.2142
**Solar Voltaic*	1.1061
**Solid Waste*	0.4775
**Water*	0
**Wind*	3.7937
**Wood/Wood Waster*	0.1761
Total:	100%
**Renewable Energy Resources Subtotal:*	6.75%

Air Emissions

Carbon dioxide (CO_2), nitrogen oxides (NO_x), and sulfur dioxide (SO_x) emission rates for the PJM Regions.

PJM SYSTEM MIX - Emissions

Emission Type	Lbs. per MWH	Percentage of PJM Regional Average
Carbon Dioxide	810.8353	100%
Nitrogen Oxides	0.3311	100%
Sulfur Dioxide	0.4416	100%

The benchmark emission levels that are shown approximate the emission rate for all electricity generation in the PJM region. Data used to calculate the emission profile came from generator owner-entered values, EPA generator-specific emission factors based on 2004/2005 CEMS data, EPA plant emission factors from eGRID or fuel type default. CO is a “greenhouse gas” which may contribute to global climate change. SO and NOx released into the atmosphere react to form acid rain. Nitrogen Oxides also react to form ground level ozone, an unhealthful component of “smog.”

One hundred percent of the total electricity supplied was purchased from other suppliers and the amount of nuclear waste attributable to producing this electricity is not known and is not included in this table.

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