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Electric providers are required by the New Hampshire Public Utilities Commission ("NHPUC") to provide customers with an environmental disclosure label with information to evaluate services offered by competitive suppliers and electric utilities and provide information about the environmental and public health impacts of electric generation. Further information can be obtained by calling your electric utility, competitive electric supplier, or by contacting <u>NHPUC</u>.

Power Sources	NEPOOL Average System Mix
Coal	4.17%
Natural gas	37.58%
Oil	10.94%
Nuclear	30.22%
Hydro	6.21%
Other Renewables	10.87%
Total	100.00%

**Source:** NEPOOL GIS reports for the 4 quarters ending Sept 30, 2015. TSE's Power Sources reflect the system mix.

# NH Renewable Energy Certifications (RECs)

REC Type	Number of RECs	Percent of NEPOOL
Class I	2,484,152	5.54%
Class I Thermal	16,024	0.04%
Class II	6,432	0.01%
Class III	1,038,530	2.31%
Class IV	155,006	0.35%
Total NH	3,700,144	8.25%

**Source:** NEPOOL GIS reports for the 4 quarters ending Sept 30, 2015.

NH Renewable Portfolio Standards (RPS)					
Year	Class I	Class II	Class III	Class IV	
2014	5.00%	0.30%	0.50%	1.40%	
2015	6.00%	0.30%	0.50%	1.50%	
2016	6.90%	0.30%	0.50%	1.50%	
2017	7.80%	0.30%	8.00%	1.50%	
2018	8.70%	0.30%	8.00%	1.50%	
Source: NHPUC. TSE's NH RECs requirements equal the RPS Standard.					

#### **About Power Sources**

Your electricity is transmitted across the New England electric system, which receives electricity from power plants throughout the region to meet the requirements of all customers in New England. The "**NEPOOL System Mix**" represents the percentage of power supply from each power source in the New England Power Pool ("NEPOOL"). Suppliers are responsible for generating or purchasing electricity that is added to the electric system in an amount equal to your electricity use.

### **About NH Renewable Energy**

To promote the development of renewable and clean sources, NH through Renewable Portfolio Standard ("RPS") legislation (RSA 362-F), requires all Suppliers to acquire specific percentages of energy from renewable resources as evidenced by **Renewable** Energy Certifications ("RECs"). NH RPS sources defined as Class I sources include generation facilities that began operation after Jan 1, 2006 and produce electricity from wind energy; geothermal energy, hydrogen derived from biomass fuel or methane gas, ocean thermal, wave, current, or tidal energy, methane gas, or biomass. Displacement of electricity by end-use customers from solar hot water heating systems, incremental new production from Class III and IV sources, and existing hydropower and biomass facilities that began operation as a new facility through capital investment also qualify as Class I sources. Class II sources include generation facilities that produce electricity from solar technologies and began operation after Jan 1, 2006. Class III sources include generation facilities that began operation on or before Jan 1, 2006 and produce electricity from eligible biomass technologies having a gross nameplate capacity of 25 MW or less or methane gas facilities. Class IV sources, after the Jun 2012 enactment of SB 218 are now defined as: hydroelectric generation facilities that began operation on or before January 1, 2006, and when required, have documented applicable state water quality certification under section 401 of the Clean Water Act, and either: A) has a capacity of 5 MW or less and has actually installed upstream and downstream diadromous fish ladders; or B) has a capacity of 1 MW or less , is in compliance with applicable FERC fish passage restoration requirements, and is interconnected with an electric distribution system located in NH. Please note that the NHPUC has issued Order 25,394 waiving its rule requiring Class IV facilities to have installed upstream and downstream diadromous fish passages.

# **NEPOOL Average Emissions**

Emission	Lbs per MWh	
Carbon Dioxide (CO2)	862.86455	
Nitrogen Oxides (NOx)	0.80808	
Sulfur Dioxide (SO2)	1.07897	
Carbon Monoxide	0.72422	
Mercury	0.00091	
Particulates	1.15158	
Particulates (< 10 microns)	0.64908	
Organic compounds	0.04860	

**Source:** NEPOOL GIS reports for the 4 quarters ending Sept 30, 2015. TSE's emissions reflect the system mix.

## **Air Emissions from Power Sources**

The air emissions listed below are produced when certain fuels are used to generate electricity.

- **Carbon Dioxide (CO2)** is released when coal, oil, natural gas, trash, methane, and biomass are burned. Carbon dioxide, a greenhouse gas, is thought to be a major contributor to global warming.
- Nitrogen Oxides (NOx) are formed when fossil fuels, trash, methane, and biomass are burned at high temperatures. They contribute to acid rain and ground-level ozone (or smog), and may contribute to respiratory illness. NOx also accelerates vegetative growth in lakes and coastal waters which may lead to oxygen deprivation which is destructive to fish and other aquatic life.
- Sulfur Dioxide (SO2) is formed when fuels containing sulfur are burned, primarily coal, oil, and trash. Health risks associated with SO2 include asthma, respiratory illness and aggravation of existing cardiovascular disease. SO2 combines with water and oxygen in the atmosphere to form acid rain, which raises the acid level of lakes and streams, is detrimental to crops and forests, and accelerates the deterioration of buildings and monuments.

For more information contact: New Hampshire Public Utilities Commission 21 Fruit Street, Suite 10 Concord NH 03301 1-603-271-2431