

**BEFORE THE WASHINGTON
UTILITIES AND TRANSPORTATION COMMISSION**

In the Matter of

CITY OF SPOKANE

For an Order Declaring that the City of
Spokane Waste to Energy Facility is not
“baseload electric generation” under RCW
80.80.010(4) and WAC 480-100-405(2)(a)

DOCKET _____

Declaration of Chris Averyt in Support of
City of Spokane’s Petition for Declaratory
Order

1. I, Chris Averyt, declare under penalty of perjury under the laws of the State of Washington that the following is true and correct.

2. I am the Interim Plant Manager for the Waste to Energy (“WTE”) Facility for the City of Spokane (“City”). My responsibilities include oversight for all operational, maintenance, health, safety, environmental, financial, and administrative functions for the WTE Facility.

3. Prior to assuming the role of Interim Plant Manager, I served as Assistant Plant Manager. This role includes responsibility for the day to day operations and maintenance of the facility and personnel management of these departments. Prior to my five years of employment with the City, past work experience has included process engineering and operations management roles in the wood products, combustion, steam generation, and wastewater treatment sectors.

4. The WTE Facility generates electricity from municipal solid waste. The Facility’s operations are entirely constrained by and dependent upon solid waste fuel availability. It does not store or use coal, natural gas, or any other fuel for power generation or for backup power.

5. The WTE Facility routinely curtails its electrical generation in winter, when incoming solid waste supplies do not support normal operation.

GHG Emissions Savings from the WTE Facility

6. Attached as Exhibit A is a true and correct PDF created from the United States Environmental Protection Agency (“EPA”) webpage titled “Air Emissions from MSW Combustion Facilities,” available at <https://archive.epa.gov/epawaste/nonhaz/municipal/web/html/airem.html> (last visited March 24, 2021).

7. As this webpage explains: “Two EPA-sponsored models have been developed to examine life-cycle emissions from different management methods of MSW: the Waste Reduction Model (WARM) and the MSW Decision Support Tool (DST) (PDF) (2 pp, 470K, about PDF). These models both show that MSW combustors actually reduce the amount of GHGs in the atmosphere compared to landfilling. The savings [on a life-cycle basis] are estimated to be about 1.0 ton of GHGs saved per ton of MSW combusted.”

8. The WTE Facility avoids the GHG emissions that would result from transportation if the City shipped its municipal solid waste by truck or rail to the Roosevelt Landfill. It also avoids the GHG emissions that would result from any combustion of coal or gas for production of the approximately 128,905 MWh that Avista would need annually to replace the power Avista receives from the WTE Facility. Finally, the WTE’s recovery for reuse of ferrous and non-ferrous metals avoids the GHG emissions that would result from production of new metals from virgin ores.

The WTE Facility Has an Average Capacity Factor of Less Than 60 Percent

9. We have determined that the WTE Facility's average net capacity factor is less than 60 percent.

10. The nameplate capacity of the Facility's steam turbine generator is 30 MW and its nominal rated output is 25.9 MW (25,900 kW).¹ Over the last twelve years, the average annual net electrical output, *i.e.*, the amount of electricity delivered to the transmission grid by WTE, has been 128,905 MWh (128,905,000 kWh). This represents an average net capacity factor of 56.8 percent (using the 25.9 nominal unit rating). For clarity, average capacity factor is determined as follows: 128,905,000 kWh sold per year / (25,900 kW rating x 8760 hours/year) = 56.8%.

11. The United States Energy Information Administration ("EIA") defines "base load" as: "The minimum amount of electric power delivered or required over a given period of time at a steady rate."² "Base load capacity" means: "The generating equipment normally operated to serve loads on an around-the-clock basis."³ "Base load plant" is defined as: "A plant, usually housing high-efficiency steam-electric units, which is normally operated to take all or part of the minimum load of a system, and which consequently produces electricity at an essentially constant rate and runs continuously. These units are operated to maximize system mechanical and thermal efficiency and minimize system operating costs."⁴ Due to this steady, around-the-clock, constant rate of electricity production for all or part of the minimum load of a

¹ The WTE steam turbine generator name plate is 30 MW. The unit is usually operated at a 0.86 power factor which results in 25.9 MW of instantaneous energy output and up to 4.1 MVA (mega volt-ampere reactive) output.

² EIA Glossary "B," available at <https://www.eia.gov/tools/glossary/index.php?id=B> (last visited March 25, 2021).

³ *Id.*

⁴ *Id.*

system, baseload electric generation is not constrained by the availability of fuel. In fact, it is my understanding that baseload generation owners typically arrange for or have on-site storage of primary fuel (for example, natural gas) and if possible, backup fuel (for example, #3 diesel) as an alternate fuel to ensure continuous availability and reliability.

I declare under penalty of perjury under the laws of the State of Washington that the foregoing is true and correct.

DATED this 14th day of April, 2021 at Spokane, Washington.



Chris Averyt
Interim Plant Manager, Waste to Energy
Facility, City of Spokane