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Re: CR-102 SSM Proposed Rulemaking

Thank you for the opportunity to comment on the proposed rulemaking affecting periods of startup, shutdown, and malfunction (SSM). TransAlta Centralia Generation, LLC (TCG) operates an electricity generating plant located near Centralia in Washington. Pursuant to express legislative authority and a related Memorandum of Agreement ("MOA") between TCG and the State of Washington, the plant generates "coal transition power" and is subject to unique obligations and protections. The plant burns coal in two electric generating units (EGUs) to produce approximately 10% of the power necessary for Washington State. The plant also combusts ultra-low sulfur diesel fuel in the two coal fired units for startup and shutdown purposes. These comments are being submitted on behalf of TransAlta's Centralia operations.

Summary of TCG Air Pollution Control Systems

In 2000, TransAlta purchased the Centralia Generation Facility. The two EGUs at the facility are rated to produce 710 gross MW each or a total of 1420 gross MW for the TCG facility. In 2001 and 2002, TransAlta voluntarily installed wet Flue Gas Desulfurization units (FGDs) and low NOx burners to reduce haze and acid rain causing emissions. This installation, with its solids separation equipment, generated a saleable dry synthetic gypsum product. The plant has also started operation of synthetic non-catalytic reduction (SNCR) systems on both units for additional reduction of nitrogen oxides.

The plant uses two stages of cold side (following the air pre-heater) dry electrostatic precipitators (ESPs) in series to capture particulate emissions in the form of salable fly ash from each of the units. The plant operates activated carbon injection (ACI) systems on the coal-fired units for mercury emissions control under a voluntary Memorandum of Agreement that was signed with the State of Washington in 2010. The activated carbon is injected into the flue gas stream between the primary and secondary stage of ESPs to reduce the mercury emissions.

Application of the Proposed Rule to TCG Would Have Adverse Impacts on TCG Pollution Control Systems

The proposed opacity standards and work practice requirements are not achievable for TCG.

First, to achieve the proposed 40 percent opacity standards, pollution control equipment would be stressed to the point of degradation or potential failure. One of the most important factors in the operation of precipitators is the cleanliness of the discharge electrodes and collecting surfaces. By burning ultra-low sulfur diesel at temperatures below the dew point it will increase the accumulation of unburned fuel and soot on these surfaces which will reduce the effectiveness of the precipitators ability to remove fly ash from the gas stream. TCG's precipitators are designed for coal emissions only, at specific gas inlet temperatures and its scrubbers are intended to address sulfur dioxide, not diesel PM.

Second, the requirement in WAC 173-400-040(2)(vi)(B) to engage all applicable control devices to comply with the emissions limits within four hours of the start of supplying useful thermal energy when TCG begins to feed the boiler with "any fuels that are not clean fuels" is not achievable for TCG (which is recognized in the facility's Title V Air Operating Permit).

The EGUs at TCG are large coal-fired units. The warm-up burners, firing ultra-low sulfur fuel (ULSD) are rated to supply only about 5% of the rated continuous heat input required for unit operation. The warm-up burners supply only enough heat to warm the unit and begin the combustion of coal. They do not supply enough energy to initiate electricity generation or allow energization of the pollution controls while warm-up firing on ULSD. It is necessary to fire some coal (at low firing rates) in the EGUs to attain adequate temperature and stream flows for synchronizing the generators to the grid and for reaching temperatures necessary to energize the dry electro-static precipitators (ESP). The warm-up burners simply cannot bring the EGU and associated air pre-heaters, two stages of ESP, and wet flue-gas desulfurization units (FGDs) up to anywhere near the temperatures required for safe operation. It can take up to several hours of coal combustion at minimal operating loads to achieve temperatures necessary for safe operation of the ESPs, ACI and FGD. These operating requirements have been recognized by the Southwest Clean Air Agency (SWCAA) and the State of Washington for many years: "The startup period begins when fuel is introduced into a boiler to raise its temperature to operating conditions. The startup period ends when the earlier of the two-operating event below occurs: (a) opacity in the gas path downstream of both ESPs has stabilized below 10% for 30 minutes; or (b) 8 hours have elapsed after the startup unit is synchronized electrically on-line." Condition M9 of the Title V Air Operating Permit SW98-8-R3-A.

These operating procedures, reviewed and recognized by SWCAA, require that the flue gases leaving the air pre-heaters must reach 180 degrees F before the primary ESPs can be energized. This temperature is needed to avoid sulfuric acid condensation and severe corrosion to and

degradation of the ESP plates and wires. The secondary ESPs gas temperatures must reach 220 degrees F before these ESPs can be energized. The ACI injection cannot be initiated until the secondary ESPs are on-line and have stabilized in order to capture the injected carbon. The flue gases from the secondary ESPs cannot be transferred from the bypass stack into the FGD and main stack until both stages of ESPs are on-line.

The proposed language does not recognize that it takes a reasonable period of time to attain proper temperatures required to startup ESPs or Wet FGD, nor does it recognize that there are multiple stages of applicable emission control equipment that must be started up in sequence and in the proper order. TCG's Title V permit allows a startup period of 8 hours for this staged startup to occur. It does not always take a full 8 hours, though that time is certainly required when performing a cold startup, and generally the safest amount of time to ensure equipment integrity from any startup position.

Given TCG's current pollution control equipment, it will be practically impossible to achieve the new standards without either compromising the integrity of the current pollution control equipment or making costly upgrades.

Removing the Affirmative Defense Clause Would Make SSM Fines Unavoidable

As described in detail above, it is currently impossible for TGC to startup without opacity exceedances. If the affirmative defense clause is removed, then TGC will be fined for each startup. During SSMs, it would be impossible for TGC to ensure that opacity does not exceed 40% for more than three minutes in one hour, or fifteen minutes in eight hours. Chapter 173-400-040(2) WAC. Even at 40% it would be difficult -- if not impossible -- for TGC to achieve compliance during SSMs. Further, the proposed rulemaking does not indicate what the fines will be for opacity exceedances during SSMs. TransAlta is concerned about the potential economic impacts of these fines and that the proposed rulemaking makes it practically impossible to comply.

Application of the proposed rule to the TCG would also contravene the MOA signed with the State of Washington in 2010 as well as its enacting legislation, whereby TCG agreed, among other things, to install SNCR systems on both units for reduction of nitrogen oxides and committed $55 million in financial assistance for (i) economic development, (ii) energy efficiency and weatherization initiatives, and (iii) research in new energy technologies. In exchange for the benefits of entering into the Memorandum of Agreement, the State agreed, among other things, that (a) the plant's two units would not need to comply with the greenhouse gas emissions performance standard set forth in RCW 80.80.040 until December 31, 2020 and December 31, 2025, respectively, (b) the State would recognize that power generated at the plant "is a product that meets the greenhouse gas emissions performance standards of the State," and (c) the State would "provide certainty regarding environmental requirements that affect power generation operations" of the plant. Memorandum of Agreement at ¶ E. The continued operation of the plant

is also an express condition of TCG's obligation to continue funding the above investments in Lewis County, which all parties agreed are necessary and desirable to help offset the significant economic impact of closing the two units. Memorandum of Agreement at § 8.d.

These commitments were enacted into legislation by Senate Bill 5769, codified in relevant part at RCW 80.80.100 and RCW 80.80.110, which specifically prohibits the State from imposing any additional "operating or financial requirement or limitation relating to greenhouse gas emissions" on the plant such as those contained in the proposed rule. See RCW 80.80.110. The proposed SSM rule constitutes a requirement or limitation relating to greenhouse gases because it potentially affects TCG's ability to control emissions that fall within the definition of greenhouse gases in Washington. Accordingly, application of the proposed SSM rule to the TCG is impermissible and any final rule should exempt the TCG.

Please contact me at (360) 330-8120 if you have any questions about these comments.

Yours truly,

TRANSALTA CENTRALIA GENERATION LLC

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