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FACTS ON THE USE OF PETROLEUM COKE FOR THE ALPINE ENERGY GROUP WASTE-TO-ENERGY PLANTS

To assist the public in understanding petroleum coke and its use by the Alpine Energy Group (“AEG”), in its Waste to Energy plants as a supplemental fuel source when there is an insufficient supply of Refused Derived Fuels (“RDF”), the following information is provided:

In order to operate its facilities, AEG must meet stringent environmental permitting standards that will include the installation of Best Available Control Technology (“BACT”) for the control of emissions, and ensure that all federal air quality standards, for the protection of health and welfare are met. In addition, because of the pristine quality of the air in the Territory, the federal Clean Air Act mandates, under the stringent Prevention of Significant Deterioration (“PSD”) standards, that better-than-average air quality for particulates, nitrogen oxides and sulfur dioxide is preserved in the Territory. In short, the state-of-art pollution controls will be installed at the AEG facilities, and the protective federal air quality standards will ensure that the facilities poses no threat to public health or welfare, whether it is burning RDF or petroleum coke.

Because of the existing relationship already in-place for purchasing fuel oil, the Water and Power Authority (WAPA) will pursue the purchase of petroleum coke from HOVENSA and make it available to AEG as a supplemental fuel. Petroleum coke is significantly less expensive than the fuel oil used in WAPA’s generating facilities, and will generally produce lower emissions for each unit of power generated. Therefore, it will have the effect of reducing utility costs and pollutant emissions.

What is Petroleum Coke?

Petroleum coke is a by-product of refining crude oil. Although it is not considered to be a “fossil fuel” by EPA under its emission standards for new power plant generators, like coal, petroleum coke is composed mostly of elemental carbon and has a very high heat value, i.e., when burned it produces a very hot flame and releases a lot of heat energy. The material is in a solid form and will be transported by barge from the HOVENSA refinery to the AEG St. Thomas and St. Croix plants.

How will emissions be controlled to meet the stringent federal standards?

It is important to note that there are certain environmental risks inherently associated with the combustion of different types of fuels, e.g., propane, fuel oil, wood, garbage, coal, petroleum coke, etc. However, we are in an era where technology has advanced and that state of the art equipment and devices are readily available to control, minimize and or mitigate potential environmental risk that may be associated by combustion of the fuels noted herein.

At the proposed AEG plants, most of the substances contained in the petroleum coke will be trapped and neutralized. The bubbling fluidized bed is one of the components of the Best Available Control Technology to be installed on the facility, and one of the main reasons why air emissions will be minimized. Fluidized bed combustion is different from a conventional boiler, in that limestone is mixed with the fuel to scrub it in order to promote complete combustion (reducing carbon monoxide emissions), and to absorb sulfur contained in the pet coke. Following the bubbling fluidized bed, AEG will install additional BACT components for this type of facility, including ammonia injection to reduce nitrogen oxide emissions, and a lime scrubber to further reduce sulfur and virtually eliminate all of the acid gases. Also, following the scrubber, activated carbon will be injected into the exhaust gas stream to substantially reduce any mercury present from the pet coke, and a high efficiency filter bag house will be installed to remove more than 99.9% of the activated carbon and the fine particulates released from the combustor. With these multi-level complex state-of-the-art emission controls, the AEG facility will be one of the cleanest plants of its kind in the country.

How will the Alpine plants be required to demonstrate that it will meet the stringent federal air quality requirements?

As part of the permitting process and prior to approval of any construction activity, AEG will be required to satisfy EPA and DPNR that the sophisticated computer models developed and mandated by EPA demonstrate that when the facility is operating at its maximum capacity, the ground level concentrations of air pollutants in all potentially impacted areas will meet all air quality and significant deterioration standards. The modeling will include impacts in the immediate area surrounding the plants, as well as on nearby hills where relatively higher concentrations would be expected to be found. These models will assure the low emission levels achieved by the best available air pollution control technology to be installed on the plant. EPA will utilize weather data, as well as detailed information on the stacks, and the size and location of the buildings at the facility. In order to confirm compliance with the stringent air quality requirements, the models will provide conservative predictions of concentrations of pollutants for a number of different time frames, averaging from 1-hour to 365 days (annual). This is all part of the stringent process required by EPA and DPNR to ensure that there will be no adverse environmental effects, such that a determination can be made as to whether the plants can receive an air construction permit.

Summary

Petroleum coke will be used as a supplemental fuel at the AEG plants to enable them to produce power on a continuous basis for the required sales to WAPA. The use of petroleum coke as a fuel source to produce electric energy is not new or uncommon globally.

The petroleum coke will be significantly less expensive and its emissions will be generally lower than the petroleum products being used in WAPA's existing operations, which also burn petroleum products, yet satisfies the stringent federal air quality requirements. The best available controls will be employed to satisfy the stringent federal air quality requirements. Impacts on the community are expected to be very low and below any of the health criteria established under the Clean Air Act for the pollutants emitted. Moreover, it is important to note that federal law prohibits the commencement of construction activities associated with the AEG facilities until all air permit requirements are satisfactorily addressed.

Using petroleum coke will reduce WAPA's total dependence on fuel oil, will lower the cost for power charged to our customers and, through the application of best available control technology, will significantly reduce emissions when compared to our present generating facilities. As a consequence, WAPA firmly believes that the approval of the AEG projects is in the best interest of all our residents.