

Mainely Environmental LLC
Air, Energy & Environmental Consulting

January 4, 2018

Rhode Island Public Utilities Commission – Renewable Portfolio Standard
co/ Scott Albert, Principal/Region Manager
GDS Associates, Inc.
1155 Elm Street, Suite 702
Manchester, NH 03101

**RE: Athens Energy LLC – Request for Consideration to Approve its Electrical Wiring Configuration
Docket #4569**

To Whom it May Concern,

Athens Energy LLC (Athens) was issued a Renewable Energy Resource Order on August 13, 2015. Athens commenced with operations on October 22, 2016. On August 21, 2017 Athens Energy rewired a breaker at its facility so that electrical load for its 600 HP ID fan, Electrostatic Precipitator (ESP) and other supporting power plant equipment would be serviced directly by the power plant. As part of this work several minor electrical loads that should ideally be serviced by electricity imported from the local utility were also tied in with the breaker that services the ID fan and ESP. Table 1 includes a detailed list of this equipment. This equipment draws an incidental electric load as compared to the overall power plant and has consumed less than 0.17% (less than two tenths of one percent) of the electricity generated by the power station since start-up in October of 2016 as measured by a totalizing power meters.

Athens is asking the Commission to approve this wiring configurations as the overall plant wiring configuration meets the “intent” of the PUC’s rule. Rewiring the facility to exclude the equipment listed in Table 1 would require many hundreds of thousands of dollars and would be equipment and labor intensive for a very minimal practical change.

Table 1: Equipment List

Equipment	Detailed Equipment Description
Multicyclone related (airlock, conveyor)	Powered by a: 3 hp auger motor with measured draw of about 1 amp or 1 KW 5 hp airlock motor drawing about 1 amp each or 1 KW total.
Dryer (airlocks, conveyors, drum)	3 hp Dryer feed conveyor (C1) – measured at 1 amp or 1 KW 20 hp Dryer feed conveyor (C2) – measured at 6 amp or 5 KW 7.5 hp Dryer infeed conveyor (C3) – measured at 2 amp or 2 KW 10 hp Dryer infeed conveyor (C4) – measured at 2 amp or 2 KW 10 hp Dry chips conveyor (D1) – measured at 2 amp or 2 KW 5 hp Dryer infeed airlock – measured at 1 amp or 1 KW 15 hp Dryer outlet hopper screw – measured at 3 amp or 3 KW

	20 hp Dryer drum – measured at 6 amp or 5 KW 15 hp Dryer transfer conveyor (E1) – measured at 3 amp or 3 KW
Dryer Walking Floors	Walking Floor 2 Heater 3 KW HPU – 10 hp HPU Cooler – 0.5 hp Metering Screw – 20 hp Spike Roll – 5 hp Backrake – 3 hp Walking Floor 3 Heater 1.5 KW HPU – 10 hp HPU Cooler – 0.5 hp Metering Screw – 20 hp Spike Roll – 5 hp Walking Floor 4 Doffing Roll – 5 hp HPU – 7.5 hp HPU Heater – shared tank with WF2 HPU Cooler – shared tank with WF2 Metering Screw – 20 hp Heaters and Coolers never run at the same time. Heaters are only needed when the system is off during the winter and are therefore not added to working load. Coolers are not needed more than 5% of the day during the peak of summer and not at all during spring, winter, or fall. Walking Floors 2 and 4 share one oil tank, heater, and cooler. 25 KW is a very high estimate. The actual operating load with all 3 operating is typically 15 KW.
Other Fuel Handling - Rechipper	125 hp Rechipper – draws 55 amps when idling and 57 amps under load – equates to 42 KW. (measured draw)

Regulatory Applicability

Rhode Island’s Renewable Energy Standard Sections 5.3 & 6.8 require that “customer sited” generation is only permitted for facilities located in Rhode Island. See Regulatory Language Below. Athens was not trying to qualify as a “customer sited” generation facility but rather hopes that the Commission agrees that it substantially meets the requirement as a **non**-customer sited generation facility.

Applicable Renewable Energy Standard Rules

5.3 NEPOOL GIS Certificates associated with energy production from Off-grid Generation and Customer-sited Generation Facilities certified by the Commission as Eligible Renewable Energy Resources may also be used to demonstrate compliance, provided that the facilities are physically located in Rhode Island.

6.8 Customer-sited and Off-grid Generation facility: (i) Customer-sited and Off-grid Generation Facilities may be certified as an eligible resource if their NEPOOL GIS Certificates are created by way of an aggregation of Generation Units using the same generation technology and vintage (e.g. New versus Existing), and so long as the aggregation is certified by the Commission. Such Generation Units that are interconnected on the End-use Customer’s side of the retail electricity

meter in such a manner that it displaces all or part of the metered consumption of the End-use Customer, or not connected to a utility transmission or distribution system, will be eligible only if the Generation Unit is physically located in the State of Rhode Island.

The primary reason for the electrical changeover in August was to capture the large parasitic load elements such as the 600 hp ID fan that draws about 475 amps on average which equates to about 350 KWs per hour and the ESP which is permitted by the rules. Because of its physical location the common breaker that was switched over also services some of manufacturing operations small motors. The switchgear (Sections 102 and 103) for this breaker that services this equipment (listed in Table 1) shows an incidental electrical draw of less than 2/10s of one percent of the overall biomass power plant generation since the plant was commissioned.

Proposed Documentation

Athens Energy can provide documentation on a quarterly basis with its fuel reports to verify that the energy used by these operations is incidental and thus the plant complies with the intent of the rule. Specifically, Athens can document the Energy Total as recorded by the 102 and 103 switchgear sections of the Breaker that services this equipment in question. Athens proposes to utilize this documentation and reporting to demonstrate to the Commission on an ongoing basis the incidental amount of power used by the motors that service the production facility at Athens Energy and its overall substantial compliance with the intent of the applicable rule.

Figure 1 - Switchgear Section 102 Energy Total Monitor



Figure 2 - Switchgear Section 103 Energy Total Monitor



Athens is looking forward to your consideration of this request. We hope the information provided in this letter is complete but please let me know if you need anything additional.

Sincerely,

Mainly Environmental LLC on behalf of Athens Energy LLC

Steven Whipple, P.E.