

Big Congratulations to our customer **Athens Energy** for the Excellent Performance of their ORC Biomass Power Plant.

This is another great example demonstrating the crucial role of biomass as sustainable baseload fuel.

“According to the State of Maine we saved ratepayers in Maine \$1,160,007 last year - about 46.5% of the total savings produced by the 6 projects in the program. We are 19% of the total project capacity but we output 37.5% of the total power produced. We were producing power for 8,348 hours during that 12 month period.” stated **Scot Linkletter – Plant manager MWP**.

Basically, with 1/5 of the total installed capacity, Athens Energy produced more than 1/3 of the total output of the whole Community Based Renewable Energy Pilot Program and nearly half of the total savings.

- 7.1 MW Biomass Turboden ORC produced 59 GWh → savings 1.16 M\$
- 9 MW Wind produced 28.5 GWh → savings 0.126 M\$
- 9.90 MW Solar PV produced 17 GWh → savings 0.299 M\$

“Are CHP’s an efficient approach to reducing energy costs? I believe they not only reduce energy costs, but they also stabilize those costs for years to come. Additionally, they also promote many internal efficiencies between the host and user companies. They also endorse efficiencies in companies such as sawmills who don’t have to landfill their waste bi-products, help control energy costs and increase job creation.” stated by **Ilaria Peretti, Turboden North America Sales Area Manager**.

More information at this link

<https://www.maine.gov/mpuc/sites/maine.gov/mpuc/files/inline-files/PUC-CBRE%20Report%20Jan%202023.pdf>

See the Table below

Interconnecting Utility	Project	Resource	Capacity (MW)	Pricing Terms (cents per kWh)	Term (Years)	MWH Generated TME 11/30/22	Above Market Cost (Savings) TME 11/30/22
Versant Power	Pisgah Mountain	wind	9.00	9.3	20	28,553	\$ (126,426)
CMP	Athens Energy	biomass	7.10	9.9	20	58,828	\$ (1,160,007)
Versant Power	Exeter Agri-Energy	anaerobic digestion	3.00	Phase 1: 10.0 Phase 2: 8.5	20	13,036	\$ (264,862)
CMP	Georges River	biomass	7.50	9.9	20	39,297	\$ (644,137)
CMP	Pittsfield Solar	solar PV	9.90	8.45	20	17,135	\$ (299,329)
CMP	Goose River Hydro	hydro	0.38	10	20	-	
Total CBRE			36.88			156,849	\$ (2,494,761)

More about Athens Energy

Robert Linkletter and his brothers Richard and Bruce are the owners of Athens Energy; Maine Woods Pellet Company, and Linkletter and Sons. Their family has been working in the woods for over 53 years. Their company structure, by design goes from stump to customer. With the completion of Athens Energy the puzzle is complete. The idea for Athens Energy was conceived when they had a **very low temperatures and very high electrical costs**. Athens Energy was built on the same site as the pellet company so that they are able to utilize a multitude of equipment for both companies. Time was spent traveling to Sweden and British Columbia to observe the operation

of existing power plants. CHP is prevalent in other countries where they have been utilizing biomass in their electric portfolio for many years. Athens Energy found each situation to be different and **built to best serve their host and user companies**. With this research they were able **to shape a plan to best suit their needs**.

Athens Energy delivers not only power, but hot water and hot air to Maine Woods Pellet, which is used in the drying of pellet stock.

The new CHP provides stability for the pellet company by mitigating the cost of drying frozen wood in the winter months and allowing them to run at full speed during the months when pellets are in most demand. It will also allow them to expand production in the future and increase job creation.

Athens Energy employs a Turboden Organic Rankine Cycle and a thermal oil boiler fueled with biomass waste bi-products.

Athens Energy has been a boost for loggers, truckers, land owners, part suppliers and many other local businesses within a hundred miles of Athens. Currently Athens Energy purchases waste bark and chips from 21 sawmills. **This CHP model can emphasize the economic growth and stability of the Forestry Industry, and also benefit rural areas. Using the biomass generated from the logging operation keeps the woods floor cleaner resulting in faster regeneration and also reducing the fire hazard.**

The idea of a CHP system is based on a stable long term power purchase agreement with utilities. This along with stable R.E.C.'s from states recognizing the value of **base loaded renewable power** is crucial. The two programs they were able to take advantage of in building Athens Energy were the new market tax credits and investment tax credits. These programs were essential to getting the power plant built.