



PCFSC Green waste/Biomass Project Overview

Firewood Processing Equipment:

To optimize operational efficiency, the system would utilize the Multitek Firewood processor **1620 SS**. This will ensure an efficient and versatile processing system. A conveyor system will allow minimal handling of the firewood, and a tumbler will be used to remove dirt and bark from the firewood.

Kiln System:

The kiln system will be a Medium Nova Kiln

Boiler System:

The boiler, a Froling t4 boiler system ensures the continuity of the drying process. The Kilns can remain running over the weekend through remote monitoring.

Thermal Curtain/Power Generation Unit:

A PGFirebox300, an air curtain power generation system that allows for the combustion of diverse biomass with minimal processing, yielding an estimated **300kWh** of electricity and **1.5mWh** of thermal energy. The thermal energy will pass through a heat exchanger to provide the kilns hot water needs. This allows PCFSC to offer environmentally conscious green waste disposal solutions to Plumas County residents, while providing electricity and thermal generation.

This unit also creates biochar as a by-product to both **sequestering carbon** and as a **soil amendment** by giving bacteria and fungi a solid place to grow and thrive while also helping with moisture retention. There is also the potential for PC/PCFSC to purchase a mobile Charboss air curtain burner in addition to the PGFirebox. This unit can be easily moved to various FSC projects and generate additional biochar.

Equipment Fleet:

The suggested equipment fleet includes a VolvoEC140EL excavator, Diesel Avant 860 GT Compact Wheel Loader, and a double Axle Freightliner truck for deliveries. All CARB compliant

Green Waste/Biomass:

With the installation of the PGFirebox, FSC is poised to introduce an alternate green waste disposal option to the community. It is noteworthy that the current green waste acceptance criteria imposed by local Waste Management restricts the size and type of materials accepted. This firebox is equipped to incinerate a wide range of green waste, offering a more versatile solution for the community. Ongoing community engagement indicates there is a distinct demand for an additional avenue to manage green waste effectively.

\$15 Per 6x12 Trailer \$20 Per 7x14 Trailer (subject to change)

This air curtain burner is equipped to handle larger quantities and sizes of green waste, capable of cleanly burning 6-10 tons of whole logs, tops and root wads, per hour, ensuring both efficiency and expansive waste disposal capabilities. Ideally, the cost to the community for green waste disposal would be subsidized by grant funds, alleviating the direct financial burden on the community, encouraging responsible waste management practices and reducing the dumping of green waste in the forest.

PCFSC is applying for the **CALFIRE workforce development grant** to help with this project. We are asking for \$1,000,000 for purchase of the PGFirebox with a match of \$1,000,000 to purchase the Volvo EC140EL excavator, firewood processor, and Kiln. A letter of support from the board will be used to strengthen this grant proposal and future grant proposals for this project as more funding will be needed.

In summary, PCFSC's alternative firewood and biogeneration plan integrates a suite of equipment and systems, designed to enhance efficiency, reliability, and environmental responsibility. This approach would position us as conscientious contributors to sustainable practices within Plumas County.

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