



Ketchikan International Airport

Wisewood Energy worked with the Ketchikan Gateway Borough and Ketchikan International Airport to design and construct a new biomass boiler system in 2016. The 500 MBH boiler uses 100 tons of local wood pellets annually, displacing 20,000 gallons of fuel oil. The project was made possible by funding from the Alaska Energy Authority and the US Forest Service.

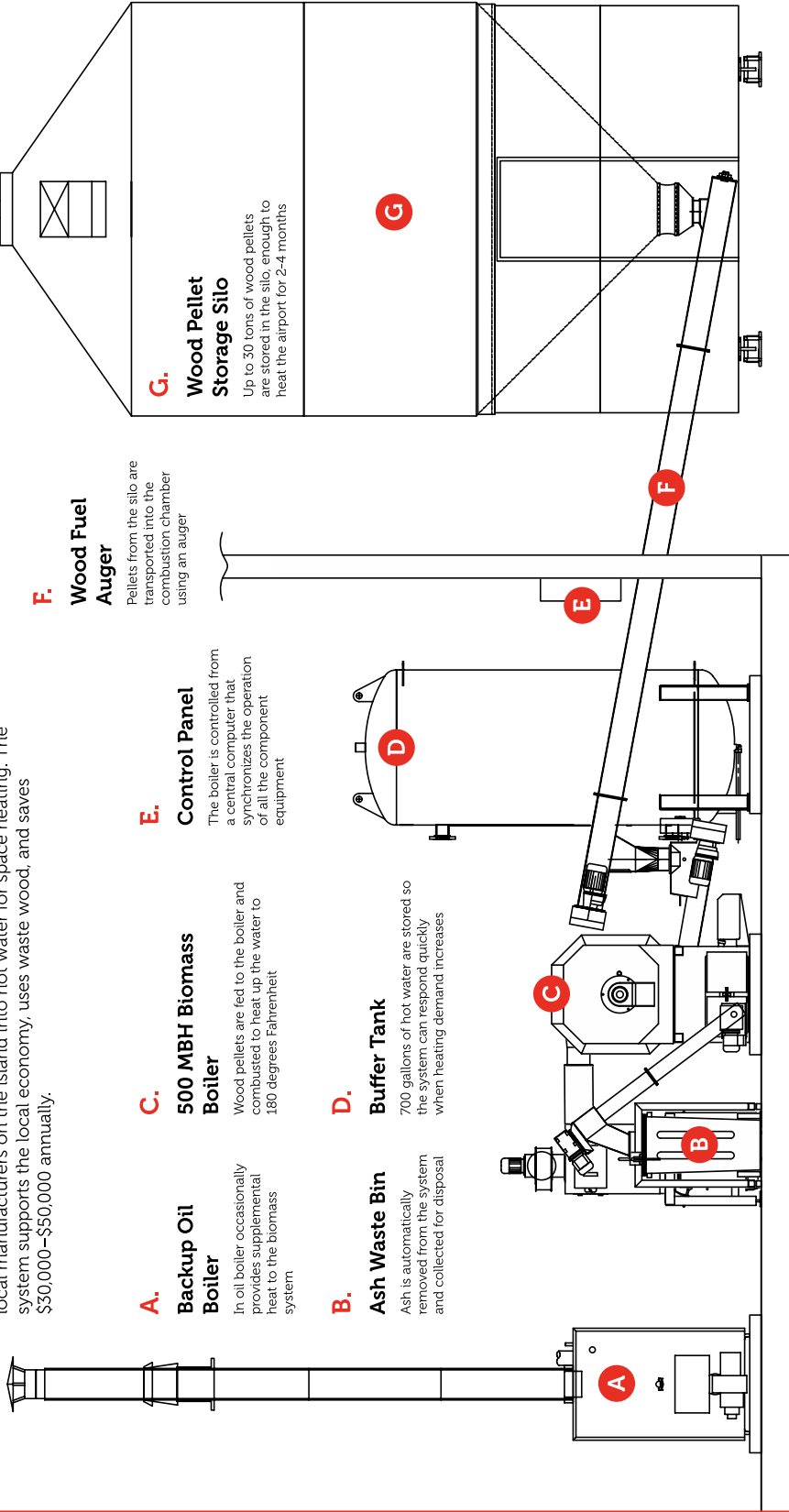


WISEWOOD ENERGY

Ketchikan International Airport Biomass Boiler System

Reimagining Alaska's Forest Resources

This innovative biomass system was installed in 2016 to replace two inefficient oil boilers which used more than 20,000 gallons of oil annually. It sustainably heats the airport by converting 100 tons of wood pellets from local manufacturers on the island into hot water for space heating. The system supports the local economy, uses waste wood, and saves \$30,000–\$50,000 annually.



A. Backup Oil Boiler
In oil boiler occasionally provides supplemental heat to the biomass system

B. Ash Waste Bin
Ash is automatically removed from the system and collected for disposal

C. 500 MBH Biomass Boiler
Wood pellets are fed to the boiler and combusted to heat up the water to 180 degrees Fahrenheit

D. Buffer Tank
700 gallons of hot water are stored so the system can respond quickly when heating demand increases

E. Control Panel
The boiler is controlled from a central computer that synchronizes the operation of all the component equipment

F. Wood Fuel Auger
Pellets from the silo are transported into the combustion chamber using an auger

G. Wood Pellet Storage Silo
Up to 30 tons of wood pellets are stored in the silo, enough to heat the airport for 2-4 months

WE
WISEWOOD ENERGY

Design Team
Wisewood Energy
Welsh Whiteley Architects
Haight & Associates
Miller Consulting Engineers

S/M/C *Schmick Mechanical Contractors*
PLUMBING • HVAC • REFRIGERATION

Construction Team
Schmick Mechanical Contractors
Marble Construction
First City Electric
Siemens Controls
Pnk Machine

Funders

