

# Cordova Wood Processing Plant



## Cordova, Alaska



### Cordwood processor provides wood and jobs for community members

#### Project Overview

The Native Village of Eyak received funds from the Renewable Energy Grant Fund for the purchase, shipping, and set-up of a firewood processor in Cordova. Eyak identified a specific system that met their needs, a Cord King Model 60. The district heating program focuses on reducing heating costs to community members by using the Cord King 60 to process their firewood. They are now able to use locally harvested biomass for heating rather than diesel oil.

#### Objectives

The main objective of this project was to meet the heating needs of the Native Village of Eyak. Cordova is only accessible by air or water so the cost of living is about 25 percent higher than the U.S. average. Using this firewood processing system allows residents to reduce high heating costs by minimizing their reliance on fuel oil. It also allows them to use a local and renewable resource.

#### Product Selection

The Cord King Model 60 has a production rate of up to nine standard cords per hour, a cycle time of 3.5-4 seconds, a splitter system, and its hydraulic reservoir capacity is 140 gallons. Its efficiency is higher than other firewood processors of its kind and it more than meets the heating needs of Eyak.

#### Economic Feasibility

The system became operational in December of 2011. Since then it has produced 4,080 MMBtu of thermal energy, which has displaced 34,000 gallons of diesel fuel. This displacement has saved Eyak \$120,000 in energy costs.

#### Quick Facts

**Total Project Costs:** \$147,720

**Funding:** Renewable Energy Grant Fund: \$136,760  
Local Funds: \$10,960

#### Equipment

Make/Model: Cord King 60  
Output: 9 standard cords/hour

#### Fuel Oil Offset

Actual annual: 11,333 gallons  
Comprehensive savings: 34,000 gallons  
(Dec. 2011-Dec. 2014)

#### Fuel Savings

Annual savings: \$40,000  
Comprehensive savings: \$120,000  
(Dec. 2011-Dec. 2014)

**Simple Payback:** 3.7 years

**Estimated Jobs Created:** 3 seasonal



Cord King Model 60, photo courtesy of AEA.

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## Allocation of Funding

The Renewable Energy Grant Fund contributed \$136,760 to pay for the purchase, shipping, and set-up the Cord King 60. Local funds contributed \$10,960 which went toward administration, labor, and supplies.

## Fuel and Storage

Wood is cut from existing dead or dry decked trees and the Cord King 60 processes it into usable firewood for the community. The wood supplies a portion of the community's winter heating needs and reduces the use of fuel oil. Cordova's annual fuel oil usage is equivalent to about 1,460 cords/year. The wood as fuel costs about one fifth the price of fuel oil and the source is both renewable and local.

## Learning Experiences/Challenges

One of the most important aspects in the development of any biomass project is the fuel supply. Where is the wood coming from? Who is harvesting the wood? What is the cost of the wood? The decked wood that Eyak planned to process with the Cord King proved to be rotten on the inside, and it has been a challenge to identify other sources. Eyak is currently working with the Alaska Division of Forestry to allow selected portions of state land near Saddlebag Glacier to be harvested for biomass fuel. This will help increase available forest light, encourage mature forests to grow in the area, and provide fuel for Cordova residents.

Eyak is also investigating a moose browse enhancement project, thinning alder and spruce trees to make room for new willow trees, giving moose their preferred grazing food and providing residents with additional biomass.



Cordova wood stacks, photo courtesy of AEA.

## Community Benefits

The project provides local employment opportunities in Cordova. When it was time to cut log decks, Eyak employed three full time seasonal workers at \$20-25 per hour. Employment opportunities help the community become more invested in the project and provide income for several residents.

Eyak provides firewood at cost to tribal members in financial need. This is an exceptional savings, the cost is less than half what residents would otherwise pay for firewood. In addition, Eyak paid for a dump truck that provided an easy and cost effective way to transport firewood to tribal elders who weren't able to acquire firewood on their own.



Aerial view of Cordova, photo courtesy of City-data.com.

## Project Contact Information

### Parties Involved:

John Whissel, Native Village of Eyak  
Email: [John.Whissel@eyak-nsn.gov](mailto:John.Whissel@eyak-nsn.gov)

### Case Study Author:

Zoe Tressel, AEA Intern  
Website: [Akenergyauthority.org](http://Akenergyauthority.org)

Updated February, 2016