2014 Legislature

Agency: Commerce, Community and Economic Development

Grants to Named Recipients (AS 37.05.316)

Grant Recipient: Alaska Gateway School District

Project Title:

Federal Tax ID: 920058369

House District: 39 / T

Project Type: Equipment and Materials

Alaska Gateway School District - Wood Chip Storage Pole Barn

State Funding Requested: \$40,000

One-Time Need

Brief Project Description:

To enable the district to chip during the summer months which produces a better product for burning with less residue.

To keep the biomass fuel supply (wood chips) from deteriorating throughout the year from various weather conditions.

Funding Plan:

Total Project Cost:	\$45,000
Funding Already Secured:	(\$5,000)
FY2015 State Funding Request:	(\$40,000)
Project Deficit:	\$0
Funding Details:	
The District will utilize local funds to comp	lete this project.

Detailed Project Description and Justification:

The original project consisted of a biomass heating facility that contains an automated wood-fired steam boiler system to heat and provide partial electricity to the existing K-12 School in Tok. The biomass plant has been in operation and producing heat since January of 2011. The plant began creating between 25 and 45 kilowatts of electricity in March of 2012. A green house that is also provided heat and power thru the biomass facility was constructed during the summer of 2013 with the first crops to be planted next month and harvested during the upcoming summer to supplement districtwide lunch programs.

The current issue that is creating problems with our project regards the storage of wood chips. The wood chips should be kept out of the rain and snow so the moisture content remains between 10 and 20% for maximum burning efficiency. If a pole barn was available to store our fuel supply, chipping could occur throughout the summer months instead of the fall and winter. We would be able to keep chips dry and not have to battle subfreezing temperatures during fuel procurement. Lastly, dry needles from the hazardous biomass being harvested freeze to the trees during the winter and will not fall off during the chipping process. These needles end up being burned in the boiler thus creating excess solid residue that requires additional cleaning phases (illustrated by Residue Removal attachment) and shutdowns (illustrated by the clunker on the right side of the attachment labeled Clunker). This issue does not arise if chipping is completed during the summer months since the needles tend to fall off during the hauling phase (illustrated by the clunker on the left side of the attachment labeled Clunker).

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The pole barn design consists of a Gable HD Building - 35'W x 100'L - mounted on a wood wall approximately six feet high. A pole barn of these dimensions would store half of the district's annual biomass fuel requirement. The wood for the structure can be purchased from one of the local mills and all labor hires will be from the surrounding communities.

Project Timeline:

The project was approved during the January 20th Regional School Board meeting as the number one priority for the district.

The project would begin as soon as an appropriation was awarded and be completed by September of 2014. All funds would be spent by June 30, 2015.

Entity Responsible for the Ongoing Operation and Maintenance of this Project:

Alaska Gateway School District

Grant Recipient Contact Information:

Name:	Todd Poage
Title:	Superintendent
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	Tok, Alaska 99780
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Has this project been through a public review process at the local level and is it a community priority? X Yes No

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