

Stores Building Heating Options

Garry White

From: Daniel Parrent [dparrent@alaska.net]
Sent: Monday, June 30, 2008 1:11 PM
To: Garry White
Subject: Re: RE:

Garry,

After checking with the boiler manufacturer, he recommended (2) medium sized boilers instead of one large boiler. The initial cost is a little less (\$30k vs \$33k), and the heat storage is a little more (2.5 million Btu vs 2 million Btu). Furthermore, We might be able to get away with installing only (1) medium size boiler for now, given the small heating load. But, we would anticipate, and make provisions for, installing the second boiler at a later date when needed.

See you at 4:30 on the 10th.

Regards,
Dan

----- Original Message -----

From: Garry White
To: 'Daniel Parrent'
Sent: Monday, June 30, 2008 11:55 AM
Subject: RE:

Dan,

The next SCIP board meeting will be at 4:30 pm on July 10th. I will add this information to the packet. I will send you an agenda when we finalize it next week.

One issue with the Stores Building to consider is the lack of a sprinkler system. The funds to install a new system were approved with the last City budget. Scott is working on a RFP to get the building up to code. He doesn't think it will happen until later in the year. But we can always try and get a waiver from the city to move forward.

I found another building at the park that might work for Pete and Bruce's operation. It has a loading dock, the roof doesn't leak, but no power currently to the building. I spoke to Pete about it and will plan on showing it to him when he has time.

Thanks

Garry

From: Daniel Parrent [mailto:dparrent@alaska.net]
Sent: Friday, June 27, 2008 7:58 AM

7/8/2008

To: Garry White
Subject: Re:

Garry,

As you and I (and Scott and I) discussed, I would like to float the idea (to the SCIP Board) of installing a biomass boiler (in the end of the Stores Bldg closest to Theobroma) to provide heat to the Administration Bldg. The new boiler would tie-in to the existing system, and the existing boiler would remain in place. Scott B told me yesterday that oil consumption at the Admin Bldg is currently about 4,500 gallons per year (gpy), but given that the building is only heated minimally, that number would probably double if there was full occupancy.

4500 gpy is fairly small in terms heating demand for a biomass boiler, but 9,000 gpy is close to being the "sweet spot".

A few numbers to think about:

4,500 gpy @ \$4.50/gal = \$20,250

9,000 gpy @ \$4.50/gal = \$40,500

A cord of reasonably dry (30% moisture content) hemlock will provide as much heat as about 93 gallons of #1 fuel oil, therefore, the wood equivalent of 4500 gallons of oil is about 48.5 cords, and double that for 9,000 gallons.

If wood is available for \$200/cord, then the annual fuel cost savings would amount to \$10,550 (at 4,500 gallons per year equivalent), and \$21,100 at 9,000 gpy equivalent.

I think a small biomass system could be installed for, maybe, \$50,000 to \$60,000 if installed in the Stores Bldg. You'd be looking at a simple payback period of 3-5 years.

AND, if Bruce P and Steve D get their briquetting operation going out there, that fuel could be used in the same boiler.

That's the conceptual idea.

Regards,
Dan Parrent

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7/8/2008