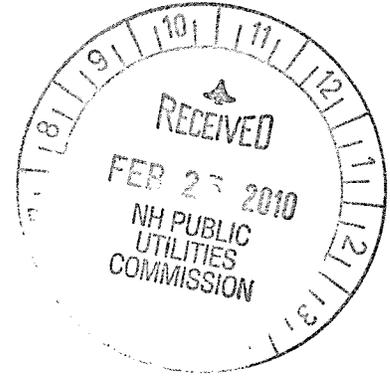


Leighton, Adele

From: David Wirth [dwirth@perkinshomecenter.com]
Sent: Monday, February 22, 2010 4:20 PM
To: Executive Director,
Subject: FW: SHW

Hi Debra,
 My suggestion on New Hampshire solar thermal rebates.
 Please feel free to contact me with any question.
 Thank you
 David Wirth
 Solar sales and design
 Perkins Home Center



From: Osgood, Jon [mailto:Jon.Osgood@puc.nh.gov]
Sent: Monday, February 22, 2010 7:34 AM
To: David Wirth
Subject: RE: SHW

David,
 You've provided a lot of valuable advice. Would you mind sending it on to Debra Howland, the Executive Director at the PUC as per:

FURTHER ORDERED, that comments and suggestions may also be filed by email at executive.director@puc.nh.gov;

I hope you'll be able to attend our Technical Session.

Thanks,
Jon

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

From: David Wirth [mailto:dwirth@perkinshomecenter.com]
Sent: Saturday, February 20, 2010 3:11 PM
To: Osgood, Jon
Subject: SHW

Hi John,
 I was looking at the SHW draft and thought I would give my opinion on a few of the questions.

I think that \$1,000.00 per single family residence is appropriate. Multi-family buildings should be higher, \$1,500.00 per unit.

The incentive should not be based on output. A well designed SHW system provides 60-70% of the annual hot water requirements, 95% in the Summer and 50% in Winter. By basing the incentive on output, customers and installer will oversize systems because the additional panels actually lowers the price. In Vermont which pays by output at \$1.75 per 100 btu's, a solar collector that retails for \$750.00 will get an incentive of \$560.00 from the state and \$225.00 From the Federal making the collector cost - 35.00 dollars. If 3 collectors are cheaper than two and four are cheaper than three where do you stop.

Customers and installers will tell you that the additional production will go to space heating. You will end up with a lot of addition heat in July, "how much will you need then". You can always dump the additional heat into a swimming pool, or into the air through a modine mounted outside of the home, or you can simple waste the heated water directly back into the ground, and heat it up again tomorrow. Unfortunately you waste a lot of water and electricity dumping heat.

What would the benchmark be for an effective solar space heating system, \$10,000 for 10% of their load. Insulation and air sealing will easily replace 10% of that load at a fraction of the cost. A well designed SHW system will only provide about ½ of the hot water load in the winter, will do you get the btu's to commit to the heating side. A typical boiler in NH is 165,000 btu/hour, the average collector harvests less than 10,000 btu/day. How can you think about replacing a piece of equiptment that was designed for that home that is capable of producing 3,960,000? Btus/day with a collector that harvests 10,000.

To replace that boiler you would only need 396 hot water collectors, if the sun is shining, if not you will need many more.

Please do not put any incentive on space heating, and do not pay by production. Keep your program as simple as possible, and lets promote solar installations that are functional, attractive and built and designed for a lifetime.

I am happy with everything else. Thank you

David Wirth
Perkins Home Center
Solar Sales and Design