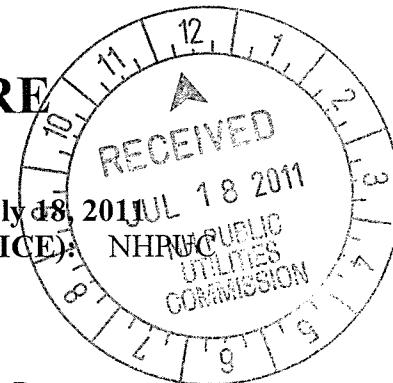


STATE OF NEW HAMPSHIRE

Inter-Department Communication

DATE: July 18, 2011
AT (OFFICE): NHPUC



FROM: Kate Epser *KE*

SUBJECT: DE 10-024 Residential Solar Water Heating Rebate Program
State Incentive Levels

TO: Chairman Getz, Commissioner Below, Commissioner Ignatius and
Executive Director Howland

The New Hampshire Public Utilities Commission's residential solar hot water rebate program, beginning on April 21, 2010 (see Docket 10-024, Order No. 25,092), currently utilizes two sources of funds to provide a two-part rebate to NH residents. The first part of the rebate comes from the state's Renewable Energy Fund (REF), and ranges from \$600 to \$900, a three-tiered rebate that depends on the annual rated production of the system. The second part comes from the American Recovery and Reinvestment Act (ARRA) by way of the Office of Energy and Planning (OEP), and is a flat \$2,000 rebate, irrespective of size, providing that all program requirements have been otherwise met¹. Of the \$496,000 allocated to this program by OEP/ARRA, \$488,000 has either been paid or reserved, leaving \$8,000 for another 4 program participants. All ARRA funds must be expended, per the program contract with OEP, by February 17, 2012. The State funding for this program, from the REF, currently has reserved or expended only \$165,000, and still has \$335,000 remaining from its program budget of \$500,000. The state funds do not expire.

In order to best prepare for the exhaustion of the ARRA/OEP funds, and to prevent a sudden rebate reduction from on average, \$2,600, to a mere \$600-\$900 (per participant), staff recommends increasing the state portion of the rebate program to an amount that would both ensure the continuity of the program and sustain active program participation. Staff conducted internal research and sought feedback from the installer community on this point, the comments from which can be viewed in Attachment 1 herein. A common rebate range offered by other state rebate programs and corroborated by NH-based installer's as sufficient to continue strong NH program participation was \$1,000-\$2,000 per system. In addition to the recommended change in rebate levels, it is also recommended that systems with an annual production, including shading losses, of 5.5 million British Thermal Units (MMBtus) qualify for the Tier 1 state rebate, assuming the

¹ The amount increased to \$2,000 from its original amount of \$750 in order to increase program participation rates. Participation rates did in fact increase after the increase took effect in November 2010. To date, this rebate program has had 225 participants.

system meets all other program requirements. This decreased output level would better allow small households to purchase more affordable and appropriately sized systems, without compromising quality or accommodating excessive shading losses. Based on these considerations and to allow for optimal program continuity in light of undetermined future REF revenues, it is recommended that the state rebate be raised to a level of **\$1500, \$1700, and \$1,900 for Tiers 1, 2, and 3, respectively**. Based upon historical program participation, 82% of participants qualified for the Tier 1 rebate, 11% qualified for the Tier 2 rebate, and 7% qualified for Tier 3. At these participation proportions, another 217 applicants could participate in the program at its current fund level of \$335,000. It is recommended that this new rebate level take effect immediately upon the exhaustion of ARRA/OEP funds, and to have this transition clearly defined and publicized in advance of the ARRA/OEP funds reaching zero. Additionally, it is also recommended that these new recommended rebate levels (\$1500, \$1700, \$1900) decrease in the future upon the exhaustion of the remaining \$335,000 of the state program budget that was originally allocated in fiscal year 2011.

Attachment 1. Installer feedback on incentive levels.

1. "I think \$1,500 is enough considering that installs will be increasing as the year dwindles down, and that oil prices are still high. Exhausting the fund will have the greatest negative effect."

--David Wirth, Perkins Home Center.

2. "Incorporate added incentive dollars for the replacement of the old primary hot water system: \$500.00/system. Also, have tiers:

6 - 15 MMBTU	\$1,500.00
16 - 26 MMBTU	\$1,750.00
26 and over	\$2,000.00"

--Mark Weissflog, KW Management

3. "I recommend we keep this incentive as high as possible, perhaps at \$1,500 for the federal side. It is a very good selling point for us. Clients do care for that cash coming back to them within weeks. It makes it very attractive."

--Fuat Ari, Bright Light Solar

4. "I would recommend \$2000, which is approximately enough to cover the cost of a new tank. I would also recommend that the money be reserved for 1 year once the rebate application is confirmed. SUNREI has about a dozen homeowners who are interested and ready to commit for next summer."

--Melissa Elander, Solar Up North (SUNREI)

5. "The Maine rebate is \$1000 for solar hot water and keeps people interested - that with the tax credit together is a decent incentive. I would say \$1000 or \$1500 but not more than \$1500 to keep the money in the program longer. Without the PV rebate we at least have the SHW rebate to persuade people in NH. If that goes away it will be a real challenge moving forward.

My recommendation is to also make it a straight rebate versus the tiers. The cost for solar hot water varies so little and the tiered program essentially keeps everyone in the first tier because of the shading effect on the Btus rating. In my experience 98% of our clients qualify for the tier 1 rebate - only those who do space heating qualify for the higher tier. Space heating with solar is the exception and not the rule so I don't feel the rebates need to cater to them. My recommendation is \$1000 or \$1500 to all residential solar hot water systems regardless of size. In Maine they have a cap at 25% the system cost, so if a system is less than \$4000 (which I don't know any that are unless it's a do-it-yourselfer) they would get less than the full rebate amount, otherwise everyone gets the one rate. It makes it simple to calculate, simple to market."

--Jennifer Hatch, ReVision Energy

6. "While SHW is not my primary market and I generally partner with another company on installations, I would like to see the residential SHW rebate at \$2000, if possible. I believe the high level is warranted to continue to push the matter of alternative energy in our state, particularly those that involve New Hampshire resources (and I do consider that New Hampshire sunshine). I would also like to see the utilities include a note in their "otherwise useless" monthly literature to let people know that the funds are available and to what extent - and that it is not going to get any better for them than the present program."

--George Horrocks, Harmony Energy

7. "If the fed funding is gone then I think, in order to keep the interest high, the three levels of funding should be \$1500, \$1800, \$2000 respectively."

--Mitch Sidd, HB Energy Solutions

8. "I would prefer to see the rebate kept somewhat small so it lasts longer. It would really hurt the momentum if it died off completely. I think anything over \$1000 catches people's attention. I do like the different level rebates based on collector size: \$1000, \$1150, and \$1300? Those amounts are my gut feeling. And also, reduce the BTU production level by 10% on the first and second level. A small flat panel doesn't make the first level cut, and there are some single person homes that this size panel is appropriate."

--Sandra Jones, PAREI

9. “The NH Sustainable Energy Association recommends a doubling of the size of the state rebate to \$1200-\$1800 dollars, depending on the collector size. With an installed cost of \$7500-\$10000 and a typical payback period of 5-7 years, this would be sufficient to eliminate nearly one year from the payback period. This would provide a suitable incentive to encourage continued demand while stretching the money out over a large number of consumers.”

--Michael O'Meara, NH Sustainable Energy Association