

NHPUC 27MAY16PM1:08

STATE OF NEW HAMPSHIRE

Intra-Department Communication

DATE: May 27, 2016

AT (OFFICE): NHPUC

FROM: Barbara Bernstein, Energy Analyst**SUBJECT:** DE 13-298 Commercial and Industrial Bulk Fuel-Fed Wood Pellet Central Heating Systems Rebate Program - Proposed Modifications**TO:** Martin P. Honigberg, Chairman
Robert R. Scott, Commissioner
Kathryn M. Bailey, Commissioner
Debra A. Howland, Executive Director and Secretary**CC:** Karen P. Cramton, Director, Sustainable Energy Division
David K. Wiesner, Staff Attorney

The Commission approved a Commercial and Industrial (C&I) Bulk Fuel-Fed Wood Pellet Central Heating System rebate program (Program), pursuant to RSA 362-F:10, VIII, by Order No. 25,605 issued on December 18, 2013. This Program is funded by the Renewable Energy Fund (REF). On May 10, 2016, Commission Staff held a technical session and received comments related to proposed modifications to the Program. Issues discussed during the technical session relevant to the Program are detailed in the analysis below.

After consideration of this input, additional written comments received from stakeholders, and further Staff analysis of the Program terms and conditions, Staff recommends the following modifications to the Program's terms and conditions. Staff also recommends that the Commission schedule a public comment hearing and receive written comments regarding the proposed Program modifications.

Temporary Increase of the Incentive Level

Wood pellet central heating system installers have requested that the rebate be increased to offset the negative market effects of current low oil prices. According to these installers, the recent drop in heating oil prices has negatively impacted their ability to sell wood pellet central heating systems, and therefore a temporary increase in the rebate level should be considered.

The current rebate level is 30% of the heating system cost up to a maximum rebate of \$50,000. In addition, the Program offers a rebate of 30% of thermal storage costs up to a maximum rebate of \$5,000. At the recent technical session, an argument was made that the industry needs a rebate level of 50% of the total system cost up to \$80,000 due to the current price of oil and the

fact that these systems do not qualify for the federal investment tax credit (ITC). It was also suggested that the thermal storage adder be retained and that it does not need to be increased at this time.

The table below summarizes the number of Program rebate applications received since 2014, and tends to support the installers' assertion that system sales have decreased dramatically since last year:

Calendar Year	Total Applications Approved
2014	49
2015	5
2016 (<i>to date</i>)	5

Commercial system costs vary widely from as little as \$28,000 to over \$480,000, with an average system cost of approximately \$86,000.

When considering an increase in the incentive amount, Staff must balance the level of Program participation with available funding constraints. If the incentive amount is set at a level that is too low, Program participation will decline and the allocated funds will not be put to productive use. On the other hand, if the incentive amount is set at a level that is excessive, Program participation may outstrip available funds and the Program will be oversubscribed with long application waitlists. The challenge of finding and maintaining this balance is exacerbated by the uncertainty resulting from annual fluctuations in the amount of alternative compliance payments (ACP) received, as ACP revenue is the sole source of funding for the REF.

Based on its review and analysis, Staff recommends that the rebate level be increased on a temporary basis to 40% of the total system cost up to a maximum limit of \$65,000. Staff further recommends that the additional rebate for thermal storage of 30% of the cost of the thermal storage tanks and related components up to a maximum of \$5,000 be continued. The Program currently has approximately \$575,000 in funding available, so the increased rebate amount would support the installation of 9-17 systems, depending on system cost and eligibility for additional rebate options.

The proposed incentive level increase would be in effect on a temporary basis and would be reviewed by Staff on a periodic basis as oil prices and industry market conditions change; if Staff concludes that a decrease in the incentive level is warranted, it would recommend such a modification to the Commission after receiving input from interested stakeholders.

Development of Additional Fuel Storage Rebate Adder

An additional incentive payment for larger fuel storage bins was also discussed with stakeholders. The additional incentive for larger bulk storage units seems out of the scope of the

program since bins for larger systems start at approximately \$4,500, and require a concrete slab in addition to other site work.

Participation in Class I Thermal REC market and Metering Rebate Adder

Staff recommends that systems applying for the Program with renewable thermal energy capacity of greater than 200,000 Btu per hour be required to be certified as eligible for participation in the New Hampshire thermal renewable energy certificate (REC) program. To assist these systems in achieving thermal REC eligibility, Staff recommends the Commission provide a rebate adder of \$5,000 per system to support installation of thermal metering equipment compliant with the Puc 2500 rules.

If the Commission were to propose amendments to the Puc 2500 rules, then changes to the required metering and validation provisions for thermal energy systems might be considered that would permit thermal REC eligibility for these systems through a simpler process. If such changes were implemented, then modification or elimination of the metering equipment rebate adder should be considered.

Inclusion of Other Biomass Fuels

One comment was received requesting that the Program be expanded to include other biomass fuels, in particular processed dried chips (PDCs). This commenter noted that the inclusion of PDCs would increase fuel diversity and security, and noted wood pellet boilers can also burn PDCs. Staff notes that an original goal of the Program was to stimulate the market for bulk wood pellet delivery. Since this goal has not yet been met and the market is still far from mature, Staff recommends that the Program continue to focus on wood pellets as the only eligible fuel source.

Emissions requirements

The Program's current standard for emissions of particulate matter (PM) is 0.32 lb/MMBtu heat output or less. Technical session participants agreed that the PM emissions standard should be decreased to match the Massachusetts requirement of total PM emissions of less than or equal to 0.10 lbs/MMBtu, as most systems can readily meet this standard. Staff recommends that the PM emissions standard be decreased to this lower amount.

Ben Amsden <blamsden@plymouth.edu>; Bernstein, Barbara
<Barbara.Bernstein@puc.nh.gov>; Bob Eldredge <NHEnergyGuy@gmail.com>; Boyer, Roger -
FS <rboyer@fs.fed.us>; Brad Simpkins <brad.simpkins@dred.state.nh.us>; Charles Levesque
<levesque@inrslc.com>; Charlie Cary <info@biomasscombustion.com>; Charlie Niebling
<niebling@inrslc.com>; Chris Williams <cwilliams@cpwarchitects.com>; Clark, Robert -FS
<rclark01@fs.fed.us>; 'Dan Wilson' <DWilson@wilsonengineeringservices.com>; Dana Nute
<dnute@resilientbuildingsgroup.com>; David Van Houten <dvh@earthling.net>; Dean Christon
<dchriston@nhhfa.org>; dhenry@hotzero.biz; Ducharme, Cheryl - RD, Montpelier, VT
<Cheryl.Ducharme@vt.usda.gov>; Eric Johnson <ejohnson@nhtoa.org>; Eric Kingsley
<kingsley@inrslc.com>; Gordon Tuttle <Gordon.tuttle@psnh.com>; Henderson, Chuck
(Shaheen) <Chuck_Henderson@shaheen.senate.gov>; Cochran, James
<jcochran@enrichedlearning.net>; Jeff Forward <forward@gmavt.net>; Joe Short
<jshort@northernforest.org>; John Hamilton <jhamilton@vestedforgrowth.com>; John Parisi
<jparisi@CrotchedMountain.org>; Jon Warzocha <jwarzocha@horizonsengineering.com>;
jstock@nhtoa.org; Jude Gates <jgates@co.rockingham.nh.us>; Julia Dundorf
<julia@grassrootsfund.org>; Kimon Koulet <lrc@lakesrpc.org>; L. SpragueSEFP
<larrysefp@gmail.com>; lrichardson@jordaninstitute.org; Lew McCreery
<lmccreery@fs.fed.us>; Mark Holden <mholden@abcnhvt.org>; Martha Richards
<maple@lr.net>; Maura Adams <madams@northernforest.org>; Milbury, Gary
<Gary.MilburyJr@des.nh.gov>; Moore, Todd <Todd.Moore@des.nh.gov>; Piper Scott
<spiper@nmsvc.com>; pveysey@jordaninstitute.org; ian.@raymondphoto.com; Richard Harris
<psiadix_03576@yahoo.com>; Rob Bloomfield <robert@concordsteam.com>;
Russell.Dowd@gdfsuezna.com; Samantha Dunn <samantha@yellowwood.org>; Sarah Smith
<sarah.smith@unh.edu>; Scott Nichols <Scott@woodboilers.com>; Shelagh Connelly
<shelagh.connelly@rmirecycles.com>; Tom Palma <palma@unitil.com>; Will Abbott
wabbott@forestsociety.org; madams@northernforest.org; Christopher.aslin@doj.nh.gov ;
sbarnes@sjindustries.com; gbass@noblesolutions.com; barbara.bernstein@puc.nh.gov;
jody.carmody@puc.nh.gov; achesley@devinemillimet.com; brian@umginc.com;
jeffrey.cyr@dos.nh.gov; kevindeannow@gmail.com; allen.desbiens@nu.com;
Harry@maineenergysystems.com; fairbanksa@conedsolutions.com;
robert.c.flanders@gmail.com; tom.frantz@puc.nh.gov; mark@frolingenergy.com;
mike.giery@glacialenergy.com; adam.gusman@glacialenergy.com; dhenry@hotzero.biz;
kjoseph@napower.com; aklaviter@integrysenergy.com; donald.kreis@oca.nh.gov;
skueffner@xoomenergy.com; mleclerc@electricityme.com; adele.leighton@puc.nh.gov;
hmalone@devinemillimet.com; jmiranda@rc.com; legal@glacialenergy.com;
rmunnely@davismalm.com; scott@tarmusa.com; elizabeth.nixon@puc.nh.gov;
amanda.noonan@puc.nh.gov; ocalitigation@oca.nh.gov; stuart_ormsbee@transcanada.com;
dpatch@orr-reno.com; lrichardson@jordaninstitute.org; jrodier@mbtu-co2.com;
mes@concordsteam.com; info@napower.com; firstchoiceenergy@comcast.net;
david.wiesner@puc.nh.gov