

STATE OF NEW HAMPSHIRE

Intra-Department Communication

DATE: November 7, 2014**AT (OFFICE):** NHPUC

FROM: Elizabeth R. Nixon, Energy Analyst *ERN*

SUBJECT: DE 10-212 Commercial and Industrial Solar Rebate Program
Recommended Program Changes

TO: Commissioner Robert R. Scott
Commissioner Martin P. Honigberg
Debra A. Howland, Executive Director and Secretary

CC: David K. Wiesner, Staff Attorney

The Public Utilities Commission (PUC) approved a Commercial and Industrial (C&I) solar rebate program (Program), pursuant to RSA 362-F:10, VIII, by Order No. 25,151 issued on October 1, 2010. After almost four years of implementing the Program, approximately 280 applications have been submitted requesting over \$4 million in rebates. Approximately half of the requested incentives (\$2 million) were requested since June 2014. The recent increase in applications is primarily a result of the implementation of the group net metering program. Larger installations are being planned with the applicants requesting at or near the project maximum rebate of \$50,000.

In view of this recent increase in applications and requested incentives, as well as changes in the proposed group net metering rules (N. H. Code Admin. Rules Part Puc 909) and the renewable energy fund incentive program rules (N. H. Code Admin. Rules Chapter Puc 2500), PUC Staff recommends making modifications to the Program as outlined in this memorandum.

Staff held a stakeholder meeting on September 26, 2014 to receive input on modifications to the Program. In addition, stakeholders provided written comments both before and after the meeting. Based on the comments received, Staff recommends that the Program be split into two categories as follows:

- 1) Solar electric and thermal systems rated less than or equal to 150 kilowatts (DC) or thermal equivalent; and
- 2) Solar electric systems greater than 150 kilowatts (DC) but less than or equal to 500 kilowatts (DC).¹

¹ The rebates for both categories are based on the nameplate capacity of the system in direct current (DC). The actual output of a system is limited by the inverter capacity in alternating current (AC). Typically, the DC to AC ratio has been 1.1 to 1.2; however, with the decreasing costs of panels, the ratio for larger systems is more commonly 1.4 or 1.5. Staff considered changing the basis for the rebate for the larger

Note the incentive levels in Category 1 for solar thermal systems have not changed. In addition, note that Category 2 is only for solar electric systems and does not include solar thermal systems. Specific terms and conditions of the proposed Program revisions are summarized in Tables 1 and 2 below:

**Table 1
Category 1: Smaller Solar Systems**

Terms and Conditions	Description
Maximum system size	150 kilowatts DC or thermal equivalent
Incentive for new solar electric	\$0.75 per watt DC or 25% of total project cost, whichever is less.
Incentive for expanded solar electric	\$0.50 per watt DC or 25% of total project cost, whichever is less.
Incentive for solar thermal	\$0.12/kBtu/yr for 15 or fewer collectors (0.07/kBtu/yr for greater than 15 collectors) or 25% of total project cost, whichever is less.
Incentive for expanded solar thermal	\$0.04/kBtu/yr or 25% of total project cost, whichever is less.
Maximum incentive in combination with other incentives received	Rebate in combination with other rebates or grants received from the utility or other programs, including other state, local or federal programs, shall not exceed 40% of the total cost of the system. (Does not include federal tax credits)
Applicant cap	No more than 10 pending project applications, or applications for incentives in the aggregate equal to or greater than 30% of the total Category 1 budget, may be in the name of the applicant or any other entity under common ownership, whether direct or indirect, of more than 25% of outstanding equity interests.
Installer cap	None
Project \$ cap	None
Required documentation for Step 1	<ul style="list-style-type: none"> • Proof that commercial customer of a provider of electricity (i.e., copy of an electric bill from the last 6 months). • Copy of interconnection application submitted to utility. • For applicable entities, must be registered with N.H. Secretary of State and currently in good standing. • Energy modeling, including ideal and actual modeled production. • Shading analysis showing modeling results. • Panoramic photos of installation site. • Detailed site map/sketch or Google Earth or similar aerial photo of installation site. • System schematic and/or construction drawings. • Copy of signed contract with installer and applicant indicating cost of system and size of system. • Evidence of at least five-year labor warranty.

systems to the inverter capacity in AC, but for consistency, the proposed program keeps the incentive basis for both categories the same—the nameplate capacity of the system in DC.

Terms and Conditions	Description
	<ul style="list-style-type: none"> • Lease agreement between the owner of the system and the building/landowner authorizing project installation. • Information disclosing direct and indirect ownership interests in applicant and its affiliates.
Required documentation for Step 2	<ul style="list-style-type: none"> • Copy of final executed interconnection agreement for PV systems. • Copy of paid invoices indicating total costs for parts and labor. • Copy of auditor's report of energy audit on building or other structure to be served by PV or solar thermal system. • Documentation that the system is UL-certified/SRCC/STC-certified. • Pictures of the fully installed system. • Copies of all final issued project permits and approvals. • Documentation of monitoring system, if applicable.
Step 2 application deadline	6 months after date of Step 1 approval
Extensions of Step 1 approval period	Must explain reason for delay and show substantial progress throughout the approval period (e.g., evidence of active interconnection study, state and local permitting activities, etc.)
Transfer of funds between categories	Evaluate on a quarterly basis or as necessary.

Table 2
Category 2: Larger Solar Systems

Terms and Conditions	Description
System size	Maximum 500 kilowatts DC and greater than 150 kilowatts DC
Incentive for new solar electric	\$0.65 per watt DC or 25% of total project cost, whichever is less.
Incentive for expanded solar electric	\$0.30 per watt DC or 25% of total project cost, whichever is less.
Applicant cap	No more than 10 pending project applications, or applications for incentives in the aggregate equal to or greater than 30% of the total Category 2 budget, may be in the name of the applicant or any other entity under common ownership, whether direct or indirect, of more than 25% of outstanding equity interests.
Installer cap	None
Project \$ cap	None
Required documentation for Step 1	<ul style="list-style-type: none"> • Proof that commercial customer of a provider of electricity (i.e., copy of an electric bill from the last 6 months). • Copy of interconnection application submitted to the utility. • Copy of documentation submitted for state and local permits and approvals. • For applicable entities, must be registered with N.H. Secretary of State and currently in good standing. • Energy modeling, including ideal and actual modeled production. • Shading analysis showing modeling results. • Panoramic photos of installation site. • Detailed site map/sketch or Google Earth or similar aerial photo of installation site. • System schematic and/or construction drawings. • Copy of signed contract with installer and applicant indicating cost of system and size of system. • Evidence of at least five-year labor warranty. • Lease agreement between the owner of the system and the building/landowner authorizing project installation. • Information disclosing direct and indirect ownership interests in applicant and its affiliates.
Required documentation for Step 2	<ul style="list-style-type: none"> • Copy of final executed interconnection agreement. • Copy of paid invoices indicating total costs for parts and labor. • Copy of auditor's report of energy audit on building or other structure to be served by PV system. • Documentation that the system is UL-certified/SRCC/STC-certified. • Pictures of the fully installed system. • Copies of all final issued project permits and approvals. • Documentation of monitoring system, if applicable.

Terms and Conditions	Description
Step 2 application deadline	6 months after date of Step 1 approval
Extensions of Step 1 approval period	Must explain reason for delay and show substantial progress throughout the approval period (e.g., evidence of active interconnection study, state and local permitting activities, etc.)
Transfer of funds between categories	Evaluate on a quarterly basis or as necessary.

The applications will include these provisions as additional or revised terms and conditions. The PUC should consider whether certain information submitted in connection with Program rebate applications should be afforded confidential treatment because it represents sensitive proprietary, financial, commercial, or trade secret information, as contemplated by RSA 91-A:5, IV.

Funds will only be reserved for complete applications that have been approved, and only until the applicable Step 2 application deadline date, subject to any extension(s) granted to the applicant.

To facilitate the transition from the existing Program to the revised Program, projects will be grandfathered if they have already been approved, except for projects that have changed significantly since approval. For example, if a proposed installation included multiple meters at one site, but the final configuration is for only one meter, then the applicant must submit any revisions to the project at the effective time of Program modification, or as soon as the change is known, or risk forfeiture of rebate approval. Any such projects will be reevaluated under the new terms and conditions of the revised Program, including the revised incentive levels approved in connection with these modifications.

Staff recommends that the Program revisions become effective on a specified future date in order to allow enough time for the application forms to be revised, as well as to ensure applicants will have sufficient time to gather and submit all of the required information.

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