

STATE OF NEW HAMPSHIRE  
PUBLIC UTILITIES COMMISSION

DE 10-212

RENEWABLE ENERGY INCENTIVE PROGRAM FOR  
COMMERCIAL AND INDUSTRIAL SOLAR PROJECTS

Order Modifying Program Terms and Application Processing

**ORDER NO. 25,878**

April 6, 2016

In this Order, we approve modifications to the existing incentive program for solar energy projects undertaken by commercial and industrial electric customers. The changes address the administrative process for program applications and numerous terms and conditions for the program categories for larger and smaller projects, including modest decreases in the per kilowatt incentive amount for solar electric projects. We also address program transition for Category 1 project applications and reopening of the Category 2 project application process.

**I. PROCEDURAL HISTORY**

In 2010 the Commission approved initiation of a commercial and industrial (C&I) solar rebate program pursuant to RSA 362-F:10, VIII. *See Establishing a Commercial and Industrial Renewable Energy Rebate Program*, Order No. 25,151 (October 1, 2010). The program provides incentive funds to C&I electric customers for solar photovoltaic and solar thermal energy projects. The program is funded by the renewable energy fund (REF) created by RSA 362-F:10. Application for incentive funds is made through a two-step process in which an initial “Step 1” application is typically submitted prior to construction and a final “Step 2” application is submitted once the project has become operational.

The program was expanded and modified pursuant to Order No. 25,764 issued on February 20, 2015, in which the Commission created two separate categories of eligible projects: Category 1, consisting of solar electric and thermal systems rated less than or equal to 100 kilowatts (AC) or thermal equivalent, and Category 2 consisting of solar electric systems greater than 100 kilowatts (AC) but less than or equal to 500 kilowatts (AC). That Order also modified numerous terms and conditions applicable to the program, but essentially left unchanged the two-step application and approval process. Relatively minor modifications and clarifications have been made on a number of occasions, by Commission secretarial letters issued both before and after the program modification and expansion last year.

On February 18, 2016, Commission Staff (Staff) filed a memorandum recommending that the program be redesigned and further modified to streamline its administration and reduce unnecessary delays in approving incentives, while continuing Category 1 review without interruption and reopening Category 2 for new applications, in each case with specified changes in program terms and conditions. The Commission conducted a public comment hearing regarding the proposed program modifications on March 3, 2016, and received written comments from a number of stakeholders following the hearing. This Order and prior docket filings, other than any information for which confidential treatment is requested of or granted by the Commission, are posted at <http://www.puc.nh.gov/Regulatory/Docketbk/2010/10-212.html>.

## **II. STAFF'S RECOMMENDATION**

Staff in its memorandum recommended a redesign of the program administrative process as well as changes to a number of specific program terms and conditions. According to Staff, the primary purposes of the proposed modifications include the following:

- To simplify and streamline administration of the program;

- To reduce pre-installation administrative burdens on applicants, installers, and Staff;
- To eliminate unnecessary delays in installation of systems resulting from extensive review of incentive applications prior to eligibility approval, by deferring submission of full supporting documentation until Step 2 of the application process;
- To add, drop, or modify certain program terms and conditions based on experience with application processing and program administration over the past year;
- To emphasize program compliance *certification* by the installer and applicant, rather than program compliance *documentation*, during Step 1 of the application process;
- To clearly describe the potential consequences of and recourse based on failure to meet required program terms and conditions, including the quality of installed equipment and project construction;
- To introduce interim milestone events that must be met in order to maintain incentive approval in the program; and
- To provide incentive payments for more projects by lowering the incentive levels and placing a dollar cap on each Category 2 project rebate.

As proposed by Staff, Step 1 essentially would become an incentive reservation process with only general information and documentation regarding a few key terms required to be submitted. This reservation approach should eliminate unnecessary delays in processing initial rebate applications, as only a few threshold conditions would be reviewed to confirm program eligibility. In the Step 1 application, the applicant and installer would each be required to certify that the proposed system will meet all specific program terms and conditions.

As a result of this streamlined initial step in the application process, approvals should be issued more quickly, while the burden and potential risk of meeting program terms and conditions would be placed on the installer. Staff recommended that each installation contract be required to provide either that the applicant is not required to pay the installer the approved rebate amount until after the applicant has received the payment, or that the installer will make a refund or indemnity payment to the applicant if the rebate amount is paid by the applicant and the Step 2 application is then denied based on a finding of program ineligibility. In either case, if

the rebate is not approved, the applicant ultimately will not be responsible for payment of an amount equal to the approved program incentive.

Staff proposed that the Step 2 application require submission of detailed documentation demonstrating that the project meets all program terms and conditions, together with a recertification of full compliance by the installer and applicant. To assist Staff with full verification of some number of applications and on-site inspection of some number of installed systems, Staff proposed that a qualified third party consultant be engaged through the issuance of a request for proposals for a consultant to perform the designated verification and inspection work, as well as potentially to conduct a certain number of post-payment project audits. If projects are found to have material technical or administrative violations, potential sanctions for installers and/or other development team members would include full or partial suspension or debarment from the program for a specified period of months, depending on the severity of the violations found.

In addition to its proposed changes to the program administrative process, Staff recommended numerous other modifications to the program terms and conditions, the most significant of which are summarized below:

1. Decrease in the incentive payment from 75¢ per watt to 55¢ per watt, or 25% of total project costs, whichever is less, for all new solar electric projects in Category 1;
2. Decrease in the incentive payment from 65¢ per watt to 40¢ per watt, or 25% of total project costs, or \$150,000, whichever is less, for all new solar electric projects in Category 2;
3. Modification of the non-residential eligibility criteria, such that only a customer with a commercial meter and a commercial rate class at a non-residential site will be eligible, unless the system is installed at a multi-family residence with three or more units and residential meters and the system will serve the residential units in the building; the commercial meter and rate class must have been in place for at least 12 months prior to the date of Step 1

application submittal, except for new structures for which the applicant must prove that the predominant use of the structure and property will be commercial; and the commercial meter and rate class must be maintained for at least 12 months after system installation;

4. Introduction of a customer load requirement that at least 50% of solar electric system generation must serve the meter to which the system is connected or, for a group net metering host, the group and host must be a single entity such as a municipality, school, or incorporated neighborhood association and its members; the load requirement would be shown by providing the preceding 12 months of electric usage for the meter as compared to the actual estimated generation of the system, with new service evaluated on a case-by-case basis where the applicant can demonstrate that 50% of the load will be used behind-the-meter at a new structure;
5. Decrease in the percentage limitation for the rebate in combination with other rebates or grants received from the utility or other programs, including other local, state or federal programs, from not more than 40% to not more than 25% of total system costs;
6. Exclusion from program eligibility of any project that has received or will receive a grant from the Rural Energy for America Program (REAP) administered by the U.S. Department of Agriculture (USDA);
7. Elimination of program eligibility for any expanded solar electric or thermal systems;
8. Increasing the Step 2 application deadline for Category 1 projects from 6 months to 9 months, and for Category 2 projects from 6 months to 12 months, subject to potential extension if the reason for any delay is adequately explained and substantial progress is shown throughout the approval period, such as evidence of active interconnection study, state and local permitting activities, and other project development efforts, with delays resulting from avoidable causes or intentional actions not considered grounds for extension;
9. Introduction of project development milestones required to be met in order to maintain rebate approval; project must meet all utility net metering queue milestones, and if a milestone is missed, the applicant's approval would be surrendered and the reserved rebate amount made available for use by other applicants; net metering queue milestones would have to be met even if the system is not going to be net metered;
10. Introduction of a requirement that projects must meet renewable energy certificate (REC) eligibility criteria and submit a complete REC application to the Commission concurrently with submission of the Step 2 application;

11. Elimination of the applicant cap for Category 1 projects, and modification of the applicant cap for Category 2 projects, such that no applicant, developer, installer, or owner, nor any subsidiary or affiliated business organization or other entity, may have more than four Category 2 applications in the program queue at any one time, and the creation of multiple business organizations or entities by the same may not defeat this term and condition;
12. Revision of many of the documentation requirements for both Step 1 and Step 2 applications in both project categories, including elimination of the requirement to perform and submit energy audits for benchmarking; and
13. Elimination of the current ten-year restriction on system sales and transfers, subject to limited exceptions, to be replaced with a ten-year prohibition on removal of the system from its installation site.

Staff requested in its memorandum that stakeholders provide detailed comments on the proposed terms and conditions, with a particular focus on the following issues:

- Incentive levels and caps;
- Implementation and enforcement of applicant/installer/development team cap;
- Milestones required to maintain rebate approval; and
- Treatment of systems that want to net meter, but are currently waitlisted due to utility net metering program limits.

Staff emphasized its desire for specific comment on how the proposed Category 2 applicant cap may be implemented and enforced, what information should be submitted by the applicant and installer, when this documentation should be provided, and who should be included under the cap (*e.g.*, investors, electricians, engineers, etc.). Staff stated that, in its experience, the existing applicant cap has been difficult to administer and has often required submission of additional detailed information. Staff also noted “it appears that some developers and applicants have met the letter of the current program applicant cap while possibly not meeting its spirit.”

Staff concluded by recommending that the program revisions become effective on a specified future date in order to allow enough time for the Step 1 and Step 2 application forms to be revised, as well as to ensure applicants will have sufficient time to prepare and submit the

required information. According to Staff, the current Category 1 program for projects 100 kW or less would continue in effect until the specified transition date, while the Category 2 program for larger projects would not reopen until the specified transition date.

### **III. POSITIONS OF PUBLIC COMMENTERS**

The Commission received comments from a number of interested stakeholders, including several solar electric system installers, both at the public comment hearing and subsequently through written submissions. Commenters were generally supportive of the proposed modifications to the administrative process for application review and approval. Numerous critical comments were provided, however, regarding proposed modifications to the substantive terms and conditions of the program. The following is a summary description of issues raised by commenters, presented by relevant issue:

1. Application Process and Administration. Harmony Energy Works Incorporated (Harmony) commented on numerous aspects of Staff's proposal to streamline the administrative process of program application review and approval. Harmony asserted that applications must be "fully vetted and engineered correctly to enable determination of their compliance with the program technical and administrative requirements." According to Harmony, in the absence of this full Step 1 review, "poorly vetted applications, incapable of satisfying the program requirements, will likely receive reserved funding, which is antithetical to what presumably are the [Commission's] goals." Harmony maintained that reducing Step 1 requirements and moving them to Step 2 only adds instability and uncertainty to the program and may affect the ability to finance projects.

Harmony also argued that the Commission should not dictate that "meeting program terms and [conditions] would be placed squarely on the installer." According to Harmony, it is

the array owner and not the installer that is the applicant and receives the incentive payment, notwithstanding the fact that the installer likely will be the one who fills out the application and provides the supporting documentation. Harmony maintained that the Commission should not require indemnification by the installer or the withholding or delay of payment to the installer. Instead, when the installation is complete, inspected, and approved for grid interconnection, “the installer has complied with all aspects of the construction of the array and should be paid in full for his or her work.” Similar concerns were raised in the comments filed by The Jordan Institute, Inc. (Jordan), and Resilient Buildings Group, Inc. (Resilient), in that they cautioned this requirement might “either raise project costs to cover potential losses or undermine streamlined processes that solar developers have established in order to expedite projects.”

Harmony further challenged Staff’s proposal to provide for the suspension or debarment of a solar energy system installer from submission of future rebate applications, if it is found to have violated material program terms, performed poor quality installation, installed substandard equipment, or made material misrepresentations in applications. Harmony claimed that these “new policing and punitive powers ... are not specially granted under the current legislation.” Harmony suggested that the Commission, which is not a licensing board or enforcement agency for solar installers, lacks statutory authority to impose such sanctions in the absence of new legislation granting that authority.

Harmony also opposed Staff’s proposal to engage a third party consultant, asserting that this would represent “a new level of bureaucracy for a third party consultant [that] is not warranted.” According to Harmony, if an auditor is required, he or she should be a Commission employee. KW Management, Inc. (KW Management), submitted written comments that are virtually identical to those filed by Harmony.



Jordan and Resilient supported the proposal to engage a third party to audit and confirm that projects have been installed and are functional at the time of rebate award. Jordan and Resilient also suggested it would be beneficial for the Commission to engage a third party to “write and publish case studies and press releases about the projects supported by [the rebate program] funds.” Jordan and Resilient expressed concern, however, about the Commission “attempting to claw back rebate funds if funded projects are found to have problems with installation after a number of years,” because this “would be very difficult to enforce.” At the public hearing, the representative of Borrego Solar Systems, Inc. (Borrego), described similar concerns regarding the “ten-year [audit] tail” and the Commission’s ability to “claw back” rebate funds paid years earlier, suggesting that these program provisions potentially might complicate project contractual relationships and financing transactions.

2. Incentive Levels. Many commenters argued that the reductions in program incentive levels recommended by Staff were excessive and would have adverse consequences on solar energy development in the State. For example, New England Commercial Solar Services (NECS) commented that the proposed reduction in the Category 1 incentive level would go beyond the five-year payback that most solar energy system hosts are interested in when considering a new installation. Renewable Energy Development Partners, LLC (REDP), claimed that 40¢ per watt for Category 2 projects is too low when the only costs avoided through net metering are supply costs and not the full retail rate.

ReVision Energy (ReVision) recommended that, if the rebate levels must be reduced, the Category 1 rebate be reduced from 75¢ to 65¢ per watt and the Category 2 rebate be reduced from 65¢ to 55¢ per watt. The New Hampshire Sustainable Energy Association (NHSEA), recommended that the Category 1 incentive be set at 60¢ per watt and the Category 2 incentive

be set at 50¢ per watt, citing “continued decreases in solar “hard costs” while acknowledging realistic payback expectations of solar adopters and the fluctuating ‘soft costs’ that exist, often at different amounts, across [New Hampshire] communities.”

Standard Power commented that the differential in incentive levels between Category 1 and Category 2 would result in a “donut hole” for projects between 100 kW and approximately 140 kW, in which the Category 2 rebate amount for a project in that range would be less than the Category 1 rebate amount for a 100 kW project. According to Standard Power, a transition rate between 100 kW and 200 kW might eliminate the disincentive of developing a project within that range and address the potential economic inefficiency caused by the rebate differential. Borrego addressed this issue, in part, by proposing capacity-based incentive levels for Category 2 projects using a formula that generates a downward-sloping curve starting at 75¢ per watt and declining as the project size increases. Borrego also recommended that the Category 2 incentive level maximum be increased from \$150,000 to \$275,000. NECS collaborated with Borrego in the development of the declining incentive approach and indicated support for this approach.

SunRaise Investments LLC (SunRaise) proposed that the incentive should step down over time as solar capacity is added under the program; for example, the incentive could drop by 5¢ per watt for every megawatt of solar capacity that is added under the program. SunRaise also recommended that the \$150,000 maximum incentive limit for Category 2 projects be eliminated, as it would restrict the growth of larger scale solar projects that would benefit a larger group of individuals, such as community solar or low and moderate income housing communities, in a more significant way.

Borrego further recommended that additional incentives or “adders” be considered to support systems “feeding municipalities and non-profits,” but it did not specify what those

adders should be or how they should be administered. REDP suggested that the program incentives should reflect the relative benefits and increased costs of project development at brownfields sites or other “low utility” land locations. These comments were echoed in written comments filed by Jordan and Resilient. SunRaise recommended there be a carve-out in the program budget for projects that directly benefit low and moderate income homeowners and individuals.

Renewable Energy Development Associates (REDA) proposed that the Commission consider a performance-based rather than a capacity-based rebate payment, to provide incentives for optimal system siting and more efficient operation. Borrego echoed this comment, but recommended that, in the interest of re-opening the Category 2 program sooner, the Commission should for now “stay the course with a capacity based incentive.”

3. Limitation on Other Rebates and Incentives (including REAP grants). Many commenters were critical of the proposal to limit all project rebates and incentives, including the incentives from this program, to no more than 25% of total system costs, and to entirely exclude REAP grant recipients from program eligibility. For example, SunRaise proposed that, for low and moderate income housing projects, either the current 40% limit be retained or no limit be applied. Jordan and Resilient commented that for non-profit and low-income projects “(i.e., housing authorities, low-income housing, and HHS related services) there should be [no] percentage cap.” A similar comment was submitted by the New Hampshire Community Development Finance Authority (CDFA). Harmony maintained there is no “justification of why the [limitation] should be reduced by 15% from 40% to 25%.”

Several commenters objected to the categorical exclusion of REAP grant recipients from program participation. USDA filed written comments stating that its REAP grantees often

depend on private, local, and state funding in combination with USDA's grant and loan programs to complete a project, so the proposed limitation on a program applicant's "ability to utilize multiple incentive programs may have a detrimental impact on future renewable energy generation development." USDA also expressed concern that the exclusion of REAP grantees may result in the potential underutilization of USDA's resources for the benefit of New Hampshire solar energy projects. Jordan, Resilient, Harmony, KW Management, and other commenters stressed the importance of REAP grants for certain type of project developments and the opportunity to leverage federal funds to install new systems in the State. NHSEA recommended that low and moderate income entities, as well as "political sub-divisions of the state and other non-profits (particularly tax exempt organizations that cannot benefit from other [tax-based] incentives), be allowed to use both a REAP grant and a Commission C&I incentive simultaneously, as is currently the case."

4. Commercial and Non-Residential Eligibility Requirements. Harmony and KW Management commented that the proposed program eligibility requirement to have a commercial meter would "prevent most legitimate farms in the [State] from participation in the C&I program" because "they often have only a single residential meter." REDA questioned how the general restriction to non-residential sites with a commercial meter and rate class would be applied in the case of certain small family-owned businesses.

5. Project Capacity Size. Several commenters addressed the maximum project size for Category 2 projects. For example, Borrego recommended that the eligible project size limit be removed altogether or at least modified such that the "maximum project size allowed under [RSA 362-A:9] or whatever supersedes it be used." NHSEA recommended that the project size cap be increased to one megawatt, subject to Staff's proposed maximum incentive amount for

eligible Category 2 projects. NHSEA maintained that aligning the program project size limit with the net metering project size limit would “serve to potentially leverage greater amounts of private investment against limited public funds while supporting a broader range of solar projects.” Norwich Technologies commented that increasing the eligible Category 2 system size from 500 kW to one megawatt is its “highest priority.”

Jordan and Resilient suggested that, while rebates could be capped at 500 kW system size, projects up to one megawatt should be able to receive rebates, “albeit if warranted at stepped rates that reflect economies of scale.” According to Jordan and Resilient, this change would “encourage right-sizing of projects and reduce gaming the system to optimize rebates.”

6. Behind-the-Meter Load Requirement. Many commenters questioned the proposal to require that not less than 50% of a project’s electric generation must serve the meter to which the system is connected or, for a group net metering host, that the group and host must be a single entity. For example, ReVision opposed the proposal because it would add a new requirement to the Step 1 application process, would be burdensome for solar installers, would hamper development of new group net metered solar projects, and “would create extra work for Staff that would undoubtedly cause delays in the processing of Step 1 applications.” NHSEA recommended that the Commission drop the onsite load requirement, providing specific examples of what it described as “appropriate projects that employ group net metering where the onsite load of the host simply wouldn’t be 50% (or a lesser amount) of the total group load.” REDP requested that the Commission clarify whether there would be any load requirement for the host meter, and clarify how the group load would be demonstrated if required.

Harmony asserted that the customer load requirement effectively would eliminate the ability of a business to use its system to supply multiple commercial tenants in its building, on

separate meters, or in separate locations, while preserving that right for municipalities and neighborhood associations. According to Harmony, the proposed customer load requirement would “severely cripple legitimate businesses from choosing which meter to make their grid interconnection to.” Harmony recommended that the requirement be revised to a “more moderate percentage of usage by the host meter, such as 10-15%.”

At the public hearing, the comments of a number of stakeholders suggested there are significant questions regarding the purpose, effect, interpretation, and application of the proposed customer load requirement for planned solar electric projects.

7. Project Milestones. A number of commenters addressed the proposal to require approved projects to meet milestones based on the utility net metering queue milestones in order to maintain their rebate approval, regardless of whether the project is planned to be net metered or has been granted a net metering capacity allocation by the utility. Jordan and Resilient agreed that expediting project schedules and achieving milestones are crucial for a successful program, but cautioned that municipal projects may require greater schedule flexibility due to the timing of town meetings, and recommended that Staff have the authority to waive milestone deadlines for municipal projects as may be appropriate. Harmony commented that the introduction of “interim milestone events” would not serve to “simplify or streamline the existing program, but only add a further layer of complexity.”

Borrego indicated support for the proposal to align the rebate program milestones with the utility net metering queue process, but noted potential timing discrepancies because the proposed 12-month period between Step 1 and Step 2 for Category 2 projects would not align with or account for the time at the beginning of the net metering process associated with receiving a system impact study from the utility. Borrego recommended that the rebate program

use similar timelines as the utility net metering program capacity allocation procedures, “but write their own rules as [such rules] should address both net metered and non-net metered projects [as] a large user could interconnect with no intention of net metering.” Borrego urged the Commission to clarify that rebates can and should apply to interconnected solar projects regardless of whether they net meter.

With respect to projects that apply for a rebate while on the utility net metering program waitlist, Borrego proposed that the “timing associated with meeting milestones for the rebate program [should] not start until the [net metering] clock start[s].” At the public hearing, Standard Power’s representative suggested that program applicants would be deterred by the proposed requirement that projects approved for a rebate meet specific project milestones and deadlines, even if those projects had not yet been granted a net metering capacity allocation but were still on the utility net metering wait list.

8. Applicant Cap for Category 2. Only a few commenters addressed the proposed Category 2 application cap for affiliated applicants, developers, and installers, notwithstanding Staff’s specific request for stakeholders to provide guidance regarding the potential implementation, administration, and enforcement of such a cap. NHSEA indicated its support for a “reasonable applicant cap on total rebates earned during a given program year in order to facilitate competition and resiliency in the solar market in [New Hampshire].” NHSEA recommended that, rather than limiting the cap to four applications, the cap be set at a total incentive earned dollar amount, over the course of the budget year; for example, the cap could be set at \$600,000, an amount equivalent to four rebates at \$150,000 per project. According to NHSEA, this modification would avoid the situation where a per-application cap would be “unduly limiting” on installers proposing a number of smaller projects that are each only slightly

larger than 100 kW. NHSEA also asserted that “Staff and/or the Commission will need to use legal and programmatic discretion in order to enforce [the applicant] cap and to prevent gaming of [the cap],” because this would be “expected and reasonable in order to uphold the spirit of [the] requirement.”

ReVision urged the Commission to approve the applicant cap as proposed by Staff verbatim, in order to “ensure that limited rebate funds for Category 2 are not monopolized by a single developer.” ReVision stated its belief that the proposed applicant cap is appropriate as written, notwithstanding Staff’s concerns that the language needs further development.

According to ReVision, there are examples of similar program limitations that have been successfully implemented in other states such as the Commonwealth Solar I in Massachusetts, which sets limits on rebates per developer and provides “straightforward definitions” of terms such as “installer” and “installer entity.” At the public hearing, ReVision’s representative proposed that “Staff be given the discretion and the authority just to make common sense decisions,” without the need for “a penetrating legal analysis” or an “evidentiary hearing.”

Borrego echoed Revision’s proposal that Staff be provided the authority to make a determination “in the event that someone attempts to game the system.” Borrego also recommended that, if the goal of the cap is to limit concentration risk, the maximum rebate allocation per applicant team should be changed to 30-40% of the program budget for each fiscal year. According to Borrego, this change in the cap calculation would avoid the adverse consequences of limiting the number of applications from each applicant team, which would result in “varying level[s] of concentration risk as funding changes each [fiscal year].”

9. Energy Audit Requirement. Most commenters did not address the proposal to eliminate the current program requirement that an energy audit be performed and submitted at



the time of Step 2 application. ReVision indicated its support for the elimination of this requirement for both categories of systems, to “help streamline the rebate review process and reduce the administrative burden on both applicants and staff.”

Jordan and Resilient, on the other hand, objected to the proposed elimination of the building energy audit or assessment requirement. Those commenters instead recommended that an assessment or audit be performed prior to the initial rebate application, “as this is a consumer protection step.” According to Jordan and Resilient, Staff should not be required to review or analyze the audit or assessment, but the audit or assessment should be provided as evidence that the “building owner has received information about how the solar project will impact [its] energy use and costs relative to [its] entire facility.” While acknowledging that this requirement might delay the application process and involve an additional cost, Jordan and Resilient asserted that “consumers who are well informed about immediate needs and long term energy efficiency projects may elect to modify their projects,” if they determine that “[a] more efficient building may require a smaller solar project.”

According to Jordan and Resilient, at a minimum, data provided to consumers prior to first applying for a program rebate should include:

- Existing conditions about the Site, Building Shell, HVAC Systems, Electrical, potential for Renewable Energy Systems, and Notable Problems.
- Energy Use and Cost Analysis, incorporated into benchmarking software comparing the building in question to other similar facilities - Portfolio Manager and CBECs software programs are free and allow the building owner to understand how that facility performs compared to others.
- Suggested improvements.

Jordan and Resilient further maintained that other rebate programs, such as “NHSaves, C-PACE [i.e., Commercial Property Assessed Clean Energy], CDFA’s Energy Programs, [and] TRC’s Pay for Performance Program,” all require energy audits prior to project implementation.

At the public hearing, REDA's representative stated that he also favored "auditing alongside solar feasibility," because "when you have a customer who's talking solar PV, they're also thinking efficiency, it's just kind of natural." He endorsed the view that the audit requirement should be prior to the initial program application, and he maintained that there exists "a dedicated pot of funds through NHSaves for audits at a number of levels."

10. REC Application Requirement. A few commenters addressed the proposed new requirement that program applicants be REC-eligible and submit a REC application to the Commission at the time of their Step 2 applications. Harmony and KW Management characterized this proposal as adding a new requirement that "creates further complexity not suggested by legislators as part of the program." According to Harmony, REC application should not be a program requirement "as many choose to register their RECs outside of the State" and "RECs will likely continue to be sold out of state until the State ... legislates a fair and reasonable base price for RECs, in the neighborhood of \$165-\$167 [each]." At the public hearing, Borrego sought clarification whether projects that received rebates would be required to sell all or a portion of their RECs in New Hampshire. Staff clarified that program incentive recipients would be required only to become certified as REC-eligible in New Hampshire, but would not be restricted from selling RECs anywhere within New England or elsewhere.

#### **IV. COMMISSION ANALYSIS**

The C&I solar energy incentive program, like other rebate programs administered by the Commission, is supported by the REF created under RSA 362-F:10. Pursuant to RSA 362-F:3, providers of electric service must serve a certain percentage of their load with renewable energy, which is represented by RECs, assigning one REC for each megawatt-hour or megawatt-hour equivalent of renewable power generated. If the electric service provider is unable to acquire a

sufficient number of RECs to meet its compliance obligation, then the provider must make an alternative compliance payment (ACP) into the REF pursuant to RSA 362-F:10, II. The REF monies thus collected are to be used to support thermal and electric renewable energy initiatives. RSA 362-F:10. Under RSA 362-F:10, X, the Commission must, over each biennial period, reasonably balance the overall amounts expended, allocated, or obligated from the REF between the residential and nonresidential sectors, with reference to the amount of retail electricity sales made to customers in each sector.

We have reviewed Staff's proposed modifications to the program application and administration process and to program terms and conditions, as well as the comments received from system installers and other interested stakeholders at the public hearing and through written submissions. We find that modification of the program is warranted in light of the continuing levels of interest in the program, developments in the industry, budgetary limitations, and the administrative issues which have arisen during the past year. We therefore approve and adopt Staff's proposed modifications to the program, except as otherwise described and explained below, or as otherwise noted in the Category 1 and Category 2 term summary tables attached to this Order.

We now address the issues identified by public commenters, as summarized in Section III above, and resolve other issues raised by Staff's recommendation:

1. Application Process and Administration. We find that the proposed modification of the program application and approval process, to emphasize self-certification rather than documentation of eligibility and compliance with applicable terms and conditions, is reasonable and appropriate. In particular, we find that these modifications should have the effects of streamlining the application review and approval process and reducing the time between

application submission and approval, thereby relieving some of the administrative burden on applicants and the allocation of limited Staff time and resources. Moreover, we conclude that the documentation requirements at Step 2 may be decreased in order to advance these goals, and this modification to the Step 2 document submission requirements is reflected in the attached program term summary tables.

In view of the greater weight to be placed on self-certification of program eligibility and compliance by applicants and installers at both Step 1 and Step 2, we agree with Staff that it is appropriate to shift more of the risk of ineligibility and non-compliance to the system installers. We understand that installers are most often the ones completing and submitting the program application forms, and must clearly understand the program terms as they deal with and explain the rebate program to many customers. An applicant, on the other hand, typically only participates in the rebate program once and must rely on the installer's explanations of the program's requirements. We therefore approve the recommendations concerning installation contracts in regard to timing of the incentive payment amount by the applicant to the installer or, alternatively, the inclusion of refund or indemnity provisions. We also approve the more expressly stated potential sanctions of full or partial suspension or debarment from the program if projects are found to have material technical or administrative violations as well as the ability to recover rebate funds paid to project applicants ultimately found not to have met material program terms and conditions. In the context of a rebate program administered by the Commission using REF monies, we have the authority to adopt such program conditions and limitations, notwithstanding the relevant concerns raised by Harmony, KW Management, Borrego, Jordan and Resilient. We also agree with Staff that it would be beneficial to engage a qualified third party consultant to assist with program compliance verification, project audits,

and system inspections, and we authorize and direct Staff to issue a request for proposals (RFP) to engage a consultant to perform those functions as directed by Staff.

2. Incentive Levels. While we recognize the potential benefits of a performance-based incentive model, we find that the current capacity-based incentive structure should be continued in the interests of consistency and simplicity and ease of timely implementation. We are persuaded, however, that the incentive level reductions proposed by Staff would be too great in light of current solar energy market conditions and that incentive levels should be reduced more gradually, in particular for Category 1 projects. We therefore approve incentive reductions to the following levels for the two project categories, in each case subject to a limit of 25% of the total project cost if less than the incentive payment otherwise calculated:

- (i) Category 1 new electric projects: \$0.70 per watt (AC) for applications received prior to September 1, 2016, and \$0.65 per watt (AC) for applications received on or after September 1, 2016; and
- (ii) Category 2 new electric projects: \$0.55 per watt (AC), but not in excess of \$175,000 for any project.

We acknowledge the theoretical “donut hole” created by the incentive level differential between Category 1 and Category 2 as identified by Standard Power. We note, however, that such a differential exists in the current program and there is no evidence in the record indicating that the “rebate gap” created by this differential has affected the sizes of systems applying for the incentive. We therefore decline to adopt program incentive levels based on a declining curve, as proposed by Borrego and NECS, or based on step decreases, as proposed by SunRaise.

With respect to the proposal advocated by a number of commenters that incentive “adders” be made available for certain types of projects, we recognize that projects proposed to benefit municipalities or low or moderate income homeowners, or projects proposed to utilize brownfields sites or other “low utility” land locations, may involve higher development costs or

face additional funding challenges. We note, however, that these commenters generally have not proposed specific adder amounts or justified any such proposed adder amounts with supporting evidence. We are also mindful of the overall benefits of program consistency and administrative efficiency, which militate in favor of the current two-tiered incentive structure. We therefore decline to adopt any incentive adders at this time.

3. Limitation on Other Rebates and Incentives (including REAP grants). We find persuasive the many comments critical of the proposal to limit other project rebates and incentives together with the program incentive to no more than 25% of total system costs, and to entirely exclude USDA REAP grant recipients from program eligibility. Such a limitation may have a disparate impact on projects proposed to benefit non-profit organizations, local governments, and low and moderate income housing developments. It might also foreclose the opportunity for project developers to effectively and efficiently leverage other funding sources, including federal grant programs. We note in particular the comments filed by the USDA describing the potential effects of excluding REAP grant recipients from program incentive eligibility.

We therefore reject the proposed modification in favor of an alternative approach in which program applicants may receive and use any other project rebates, grants, incentives, tax credits, and other financial benefits, including REAP grants, provided that the total sum of all such other funding and benefit sources together with the program incentive does not exceed 100% of total system costs. In this context, we find it appropriate to include rather than exclude the value of federal corporate depreciation, tax deductions, and tax credits, whether based on project investment or system production.

4. Commercial and Non-Residential Eligibility Requirements. We find to be reasonable and appropriate the proposed new program eligibility requirements based on commercial meter and account status on a non-residential structure (which may include the panel support racking for a ground-mounted system) for 12 months prior to Step 1 application for existing customers, and for at least 12 months following system installation for all customers. The only exception to this requirement would be for multi-family residences of three or more units, which may have a residential meter or meters and for which the system will serve the residential units. Home-based businesses would be ineligible for an incentive under this program, regardless of what type of meter and account the electric customer may have.

We acknowledge that this modification eliminates the exception for farms with residential meters that are operated as a business for profit. We have concluded that the benefits of greater clarity and administrative efficiency outweigh the potential cost impacts of effectively requiring commercial farms to take electric service as commercial customers in order to qualify for a program rebate payment. Alternatively, if the installation is connected to the residence, then the project would be eligible for our residential rebate program.

5. Project Capacity Size. We acknowledge that the Category 2 maximum project size limit is less than the maximum size project that may be eligible for net metering under RSA 362-A:9. We expect, however, that the \$175,000 maximum incentive amount likely will have a limiting effect on system size that operates separately from the 500 kW (AC) size cap. We are not convinced that rebate payments are necessary for projects larger than 500 kW. We therefore decline to increase the maximum system size for Category 2 program eligibility.

6. Behind-the-Meter Load Requirement. We agree with those commenters that questioned and objected to the proposal to require that not less than 50% of a project's electric

generation must serve the meter to which the system is connected or, for a group net metering host, that the group and host must be a single entity. We understand Staff's intent to focus on systems where there is significant load behind the meter or a well-defined set of participants that would benefit from a project installation. We are concerned, however, that there may be unintended consequences of such a customer load limitation, in addition to increased administrative complexity and greater burdens on those preparing and reviewing program applications. Based on those concerns, we reject this proposed modification of the program terms and conditions.

7. Project Milestones. We agree with Staff that, in conjunction with extended deadlines for project completion in both program categories, it is reasonable and appropriate to implement project development milestones based on those we recently approved for utility net metering program capacity allocations. *See* Order No. 25,874 (March 22, 2016). The milestones should apply to approved program applicants regardless of whether their projects are intended to participate in utility net metering programs. The milestones also should apply to program applicants with projects located in the service territory of New Hampshire Electric Cooperative, Inc. (NHEC), even if NHEC administers no such milestones or different milestones.

We acknowledge Borrego's comment that the applicable deadlines for utility net metering queue management and for the C&I rebate program may not fully correspond. In particular, the rebate program project completion deadline is likely to occur earlier than the utility net metering program project completion deadline. We believe, however, that the primary benefit of the common set of milestones is to serve as an *interim* check on project progress and maturity that presents an opportunity to remove speculative projects from the program prior to



the applicable completion deadline. We therefore find it is not necessary to achieve complete timing correspondence between the respective milestone completion deadlines.

With respect to projects that are approved for a program incentive while on the waitlist for a utility net metering program capacity allocation, we agree with those commenters who proposed that the rebate program milestones and associated deadlines should not apply to those projects until they have obtained a net metering capacity allocation, and the program terms should be so modified. This decision is based in part on the potential for pending legislation to be enacted this session that would increase the statutory net metering limit above its current state-wide level of 50 MW, in which event most waitlisted projects would obtain a net metering capacity allocation. If no such legislation is enacted this session, then we may revisit this decision and address it through a modification of the project milestone provisions.

8. Applicant Cap for Category 2. Staff proposed that the applicant cap be eliminated for Category 1 and revised for Category 2 to limit to four the number of pending applications submitted by any affiliated “team” of applicants, developers, and installers. Staff indicated its experience has demonstrated that the existing applicant cap, which is based on a bright line, common ownership test, has been difficult to administer and has often required submission of additional detailed information. Staff also suggested that the existing cap has not proven fully effective in limiting applications submitted by developers with significant business affiliations.

Staff requested specific comment on how the proposed new cap would be implemented and enforced, in order to achieve an effective limitation without sacrificing administrative efficiency and timely approval of eligible applications. Despite Staff’s request for such input, commenters provided very little in the way of specific guidance. ReVision invited us to consider examples used in other states such as the Massachusetts Commonwealth Solar I program.

Several commenters suggested that Staff should have maximum discretion to determine when a violation of the applicant cap has occurred.

We have reviewed the Massachusetts Commonwealth Solar I program definition of “installer entity” and the similar definition of “applicant entity,” and find these definitions are based on parent-subsidiary relationships, effectively representing a common ownership test that is not substantively different than the current rebate program applicant cap. We are also concerned that providing Staff with broad programmatic discretion to interpret a vaguely-defined affiliation standard might result in unintended consequences, as well as involving added administrative complexity and potentially delaying approval of eligible applications.

Based on these concerns, we reject the proposal to continue but modify the program applicant cap for Category 2 projects, and instead we modify the program terms and conditions such that no applicant cap will apply to either program category.

9. Energy Audit Requirement. Staff has proposed to eliminate the current program requirement for performance and submission of an energy audit at the time of Step 2 application. Jordan and Resilient have objected strenuously to this proposal, and have recommended that the energy audit requirement be retained and made a pre-condition for Step 1 application. We recognize the value of the energy audit as an initial step in evaluating options to reduce or offset customer energy consumption. We are concerned, however, about the imposition of audit costs on electric customers considering solar energy installations, as well as the added administrative complexity and potential delay in approving eligible Step 1 applications if issues arise regarding the conduct and documentation of an energy audit.

Based on these concerns, we approve the program modification eliminating submission of an energy audit as a Step 2 application requirement. The program terms should be modified,

however, to require that applicants and installers certify in the Step 1 application that the applicant has been provided and reviewed detailed information regarding energy efficiency available through the NHSaves program website (<http://www.nhsaves.com>).

10. REC Application Requirement. We find that the proposal to require program applicants to be REC-eligible and submit a REC application at the time of their Step 2 applications is reasonable and appropriate. The C&I solar rebate program puts REF monies to work supporting the development of new renewable energy development, and the REF is funded through ACPs payable in large part because of market shortages of RECs available for compliance with the New Hampshire renewable portfolio standard. It seems logical to require that program rebate recipients have their projects certified eligible for New Hampshire RECs, as this may result in an increased number of RECs available in the market for purchase by electricity providers. We therefore approve the REC application requirement for Step 2 applicants as proposed by Staff. We also take this opportunity to confirm Staff's clarification at the public hearing that the REC application requirement does not prohibit sales of RECs by program rebate recipients anywhere within New England or elsewhere where an available REC market exists.

11. System Sale or Transfer Restriction. Although no commenters addressed the issue, Staff has proposed to eliminate the current program restriction on sales or other transfers of a project, except to the host property owner or as part of a sale of the affected property, for a period of ten years following payment of the rebate. We note that this restriction has been the subject of a number of requests for Staff interpretation and Commission clarification during the past year. Staff's proposal would replace this restriction with a prohibition only on removal of the system from its installation site for a period of at

least ten years. At the public hearing, Staff stated its view that this modification should be applied retroactively, so that systems that had been previously approved and paid a rebate would no longer be subject to the ten-year sale or transfer restriction. We find this further modification to be warranted and direct that it be implemented in connection with program administration.

12. Transition Issues. Staff has recommended that the program modifications become effective on a specified future date to allow enough time for the Step 1 and Step 2 application forms to be revised, as well as to ensure that applicants have sufficient time to gather and submit the required information. We have considered the relevant issues and have determined that the following transition process and timeline should be implemented.

Category 1 project applications subject to the existing program terms and conditions will be accepted only through May 5, 2016. All Category 1 Step 1 applications received by the Commission at its offices on or before that date will be processed under the existing program terms and conditions. The modified program terms and conditions approved in this Order will become effective on May 6, 2016, and the Category 2 program will be reopened on that date. All applications received on or after that date will be processed under the modified program terms and conditions and pursuant to the new administrative procedures approved in this Order. For each program category, the eligibility date will be May 6, 2016, and projects that are installed and become operational prior to such date will not be eligible for the modified program.

In anticipation of robust demand for and potential oversubscription of the reopened Category 2 program, we will conduct two public lotteries to allocate initial queue positions for Category 2 applications received by the close of business (4:30 p.m.) on May 6, 2016. The public lotteries will be held at the Commission on Monday, May 9, 2016, starting at 1:00 p.m.

The first lottery will be for those Category 2 projects that have already received a net metering capacity allocation or are not planning to net meter, and the second lottery will be for those projects that are on a utility waitlist to receive a net metering capacity allocation. All projects participating in the first lottery will have an initial Category 2 queue position higher than any project participating in the second lottery. If a project in the second lottery group, regardless of its initial lottery queue position, later receives a utility net metering program capacity allocation, then that project will be advanced to the then lowest queue position in the first lottery group, effective as of the time it receives the net metering program capacity allocation granted by the utility. Notwithstanding an application's initial or subsequent queue position in either lottery group, incentive funds will be reserved and ultimately paid to the project owner only if budgeted monies are available for such reservation and payment.

We believe that this two-tiered lottery and queuing process and the potential "leap-frogging" over projects still on the utility net metering waitlist represent a fair and equitable approach to reservation priority that recognizes the reality that projects able to net meter are likely to be developed more quickly than those remaining on the utility waitlist. This approach is also consistent with our decision above effectively to "toll" the rebate program milestone "clock" for such waitlisted projects.

## **V. CONCLUSION**

In summary, the terms and conditions that we approve in this Order represent a reasonable and appropriate accommodation of the interests of developers of both smaller and larger size solar electric projects in an environment of program budgetary constraints. We approve and adopt numerous modifications of the program, including the application and administrative process changes and the transition plans and timing, as described above and as

summarized in the tables attached to this Order. We direct Staff to implement application submission, processing, review, verification, and approval procedures consistent with this Order. To facilitate administration, we authorize Staff to make clerical, administrative, and other modifications to program application forms and processes without further Commission approval, provided that such modifications are consistent with this Order.

**Based upon the foregoing, it is hereby**

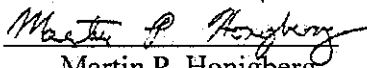
**ORDERED**, that the Commission's commercial and industrial solar rebate program shall be modified as described in the body of this Order and as summarized in the tables attached to this Order; and it is


**FURTHER ORDERED**, that Staff is directed to implement program application submission, processing, review, verification, and approval procedures consistent with this Order; and it is


**FURTHER ORDERED**, that Staff is authorized to make clerical, administrative, and other modifications to program application forms and processes without further Commission approval, provided that such modifications are consistent with this Order; and it is

**FURTHER ORDERED**, that Staff is authorized and directed to prepare and issue a request for proposals (RFP) to engage a qualified third party consultant to assist Staff with program compliance verification, project audits, and system inspections, as such activities are directed by Staff.

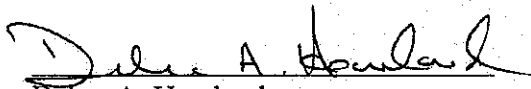
By order of the Public Utilities Commission of New Hampshire this sixth day of April,  
2016.

  
Martin P. Honigberg  
Chairman

  
Robert R. Scott  
Commissioner

  
Kathryn M. Bailey  
Commissioner

Attested by:

  
Debra A. Howland  
Executive Director

| <b>Table 1</b>                           |   |  |
|--|---|--|
| <b>Category 1: Smaller Solar Systems</b> |   |  |
| Item No.                                 | Terms and Conditions  | Description  |
| 1.                                       | Maximum System Size   | <ul style="list-style-type: none"> <li>• 100 kilowatts AC or thermal equivalent.</li> <li>• For PV, system capacity is based on the total capacity of the project as evidenced by interconnection application(s) submitted to utility.</li> </ul>  |
| 2.                                       | Program Eligibility   | <ul style="list-style-type: none"> <li>• Non-residential structures with a commercial meter and rate class, except for a multi-family residence of three or more units, if the system will serve the residential units in the building.</li> <li>• Facility must be installed and become operational on or after May 6, 2016.</li> </ul>   |
| 3.                                       | Applicant Eligibility   | Installation cannot be located on or connected to a residence, except a multi-family residence with three or more units. Home-based businesses are not eligible for a C&I rebate.  |
| 4.                                       | Electric Utility Customer Eligibility                           | <ul style="list-style-type: none"> <li>• The applicant or the end-use customer must be interconnected to a provider of electricity, pursuant to Puc 2508.03.</li> <li>• Customers of municipal electric utilities are not eligible for an incentive because municipal utilities are not subject to the Renewable Portfolio Standard, RSA 362-F, and thus do not contribute to program funding.</li> </ul>  |
| <b>Incentive Levels</b>                  |   |  |
| 5.                                       | Incentive for New Solar Electric                                | <ul style="list-style-type: none"> <li>• \$0.70 per watt AC or 25% of total project cost, whichever is less for applications received prior to September 1, 2016.</li> <li>• \$0.65 per watt AC or 25% of total project cost, whichever is less for applications received on or after September 1, 2016.</li> <li>• Rebate is based on the lower of maximum rated output capacity (AC) of the inverter or the DC capacity of the PV panels, as determined under standard test conditions (STC).</li> </ul> |
| 6.                                       | 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, based on optimal estimated generation.  |
| 7.                                       | Incentive for Expanded Solar Electric or Thermal                | None   |
| 8.                                       | 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 local, state or federal programs, shall not exceed 100% of the total cost of the system. (Includes federal corporate tax depreciation (MACRS), tax credits (ITC, PTC), and tax exemptions).  |
| 9.                                       | Project \$ Cap  | None   |



| <b>Table 1</b>   |   |  |
|--|---|--|
| <b>Category 1: Smaller Solar Systems</b>                               |   |  |
| Item No.   | Terms and Conditions  | Description  |
| <b>Terms and Conditions Requiring Documentation at Step 1</b>          |   |  |
| 10.  | Electric Meter Type and Rate Class                                  | PV system must be connected to a commercial meter with a commercial rate class on a non-residential structure. Meter and rate class must have been in place for at least 12 months prior to the date of Step 1 application submittal. Commercial meter and rate class must be maintained for at least 12 months after system installation. For new structures and new meters, applicant must prove that the predominant use of the structure and property will be commercial. A residential meter and rate class is permitted only for a multi-family residence of three or more units, if the system will serve the residential units in the building. A copy of the most current electric bill and the electric bill from 12 months prior to the Step 1 application date must be submitted for any existing service. |
| 11.  | Interconnection Application for PV                                  | A copy of the interconnection application(s) as submitted to the utility.  |
| 12.  | Applicant/Installer/Development Team cap                            | None   |
| 13.  | Google Earth image/aerial photo of site                             | Google Earth image or similar aerial photo of installation site.   |
| 14.  | Panoramic photos of the horizon                                     | Only required if cannot provide an aerial image.   |
| 15.  | Certification of Compliance with all Terms and Conditions           | Applicant and Installer shall certify full compliance with all program terms and conditions, including those which are demonstrated through Step 2 application.  |
| <b>Terms and Conditions Requiring Documentation at Step 2</b>          |   |  |
| 16.  | Final Executed Interconnection Application for PV systems           | A copy of the final executed interconnection application(s), including Exhibit B, must be submitted.   |
| 17.  | Photos of Entire PV System  | Photo showing all solar panels (so that they can be counted)<br>Photo of all inverters<br>Photo of utility meter<br>Photo of revenue grade production meter  |
| 18.  | Photos of Entire Solar Thermal System                               | Photo of collectors<br>Photo of storage tank<br>Photo of Btu meter (including production screen)   |
| 19.  | Copies of Paid Invoices   | Copies of invoices showing payment in full of all system costs, unless amount equal to approved rebate will not be paid until incentive has been paid to applicant.  |
| 20.  | Renewable Energy Certificate (REC) Eligibility and REC Applications | Must meet REC eligibility criteria, submit a complete NH REC application, and become REC certified by NHPUC. Must submit REC applications at the same time or prior to Step 2 application submittal.   |
| 21.  | Recertification of Compliance with all Terms and Conditions         | Applicant and Installer shall recertify full compliance with all program terms and conditions.   |
| <b>Other Terms and Conditions Requiring Documentation Upon Request</b> |   |  |

| <b>Table 1</b>                           |  |  |
|--|--|--|
| <b>Category 1: Smaller Solar Systems</b> |  |  |
| Item No.                                 | Terms and Conditions                           | Description  |
| 22.                                      | Power Purchase Agreement for PV                | PPA is required if the name on the electric bill and the applicant name are different.   |
| 23.                                      | Shading Analysis                               | Determine the shading losses using one of the following: <ul style="list-style-type: none"> <li>• Solar Pathfinder</li> <li>• Solmetric</li> <li>• Other model that is generally accepted by the industry and approved by NHPUC Sustainable Energy Division.</li> </ul>  |
| 24.                                      | Energy Modeling for PV                         | <ul style="list-style-type: none"> <li>• Actual Estimated Generation must be greater than 80% of Optimal Estimated Generation <ul style="list-style-type: none"> <li>• Option 1 – PV Watts for both optimal and actual For Optimal, assume tilt of 35°; azimuth of 180°; AC to DC ratio = DC capacity/AC capacity; and system losses of 14%.</li> <li>• For actual, use the same assumptions as optimal except use actual tilt and azimuth and system losses = <math>100\% - \{1 - [0.14 \times (1 - \text{shading losses } (\%)/100)\}</math></li> </ul> </li> <li>• Option 2 – Solar Pathfinder for both optimal (ideal) and actual. Assume ideal (optimal) is tilt of 35°; azimuth of 180°.</li> <li>• Other options – Models and assumptions that are generally accepted by the industry and approved by NHPUC Sustainable Energy Division.</li> </ul> |
| 25.                                      | Energy Estimation for Solar Thermal            | <ul style="list-style-type: none"> <li>• For optimal - use Collector SRCC/STC Rating for Medium Radiation Category C (kBtu/panel/day) x number of collectors x 365 days/year</li> <li>• For actual – optimal estimated generation x (1-losses (%)/100)</li> </ul>  |
| 26.                                      | Registration with the Secretary of State       | If the applicant, installer/development team member, electrical or plumbing company, or site owner is organized as a business or legal entity, then the entity must be registered and in good standing with the N.H. Secretary of State.   |
| 27.                                      | PV Panels Certification                        | The solar PV panels must be certified by a nationally-recognized testing laboratory as meeting the requirements of UL 1703.  |
| 28.                                      | Inverter Certification and Specification Sheet | Inverters must comply with IEEE 1547 and UL 1741.  |
| 29.                                      | Solar thermal collectors/systems certification | The solar thermal collectors or systems must be SRCC/STC-certified.  |
| 30.                                      | Lease agreement                                | If the owner of the site is not the applicant, then the site owner must demonstrate authorization through a lease agreement for the applicant to install the system on the site.   |
| 31.                                      | Energy Audit/Energy Benchmarking               | Energy audit/benchmarking are not required; however, applicant must have been provided and reviewed detailed energy efficiency information available through the   |

| <b>Table 1</b>                           |  |   |
|--|--|---|
| <b>Category 1: Smaller Solar Systems</b> |  |   |
| Item No.                                 | Terms and Conditions   | Description   |
|  |  | NHSaves program website.  |
| 32.                                      | Labor Warranty   | The installer's contract must include a five year labor warranty for the installation of the system.  |
| 33.                                      | Installation Contract Term Regarding Final Payment                 | The installer's contract must include a provision that requires final payment of amount equal to the approved rebate to be deferred until after receipt of incentive payment, <i>or alternatively</i> a binding obligation of the installer to refund to applicant amount equal to approved rebate if rebate not paid because of non-compliance with program terms and conditions.  |
| 34.                                      | System Schematic or Construction Drawings                          | A system schematic or construction drawings (e.g., electrical one-line diagram for PV) must be prepared.  |
| 35.                                      | Permits and Approvals  | All required permits and approvals, including, if applicable, land use approvals, alteration of terrain, endangered species, wetlands, heritage, preservation, SWPPP, building, electrical, site plan, zoning, etc., must have been obtained.   |
| 36.                                      | Revenue Grade Production Meter for PV Systems                      | A revenue grade production meter or equivalent necessary to meet REC eligibility must be installed for all PV systems.  |
| 37.                                      | Btu Meter for Thermal Systems                                      | Meters to meet REC eligibility must be installed for all thermal systems.   |
| 38.                                      | Installation Contract (including any amendments and change orders) | Contract must include:<br>Applicant name and installer/development team names and contact information<br>Total cost of system<br>Payment terms and timing<br>Address of facility installation<br>Capacity of system (in AC and DC for PV)<br>5 year labor warranty<br>Final Payment of amount equal to approved rebate deferred until after receipt of incentive payment, <i>or alternatively</i> installer binding obligation to refund to applicant amount equal to approved rebate if rebate not paid due to non-compliance with program terms and conditions. |
| <b>Other Terms and Conditions</b>        |  |   |
| 39.                                      | System Cannot be Removed   | System cannot be removed from installation site for at least 10 years.  |
| 40.                                      | Rebate Payment   | Payment will be made to applicant, after submittal of complete Step 2 application and review by NHPUC, subject to potential full verification and/or on-site system inspection by NHPUC or its authorized third party contractor.   |
| 41.                                      | Inspection/Audit   | NHPUC or NHPUC-authorized third party contractor may inspect and/or audit the project and request performance data for up to 10 years following approval of the Step 2 application and payment of the incentive. If NHPUC determines that the applicant or system has violated any program terms or conditions that cannot be corrected or  |

| <b>Table 1</b>                           |  |  |
|--|--|--|
| <b>Category 1: Smaller Solar Systems</b> |  |  |
| Item No.                                 | Terms and Conditions   | Description  |
|  |  | reconciled, as applicable, then the applicant will be required to repay the rebate, and the project will not be eligible for a program incentive.  |
| 42.                                      | Installer/Electrician/Development Team Suspension or Debarment | Installer/Electrician/Development Team may be suspended or debarred from submission of any or some number of rebate applications, if found to have violated material program terms, performed poor quality installation, installed substandard equipment, or made material misrepresentations in applications. Suspension or debarment to be in effect for a specified number of months or years, depending on severity of violations found.   |
| 43.                                      | Step 2 Application Deadline                                    | 9 months after date of Step 1 approval   |
| 44.                                      | Milestones to Maintain Approval                                | Project must meet all utility net metering queue milestones to remain approved for a rebate. If a milestone is missed, the applicant's approval will be surrendered, and the reserved rebate amount will be made available for use by other applicants. The applicant can reapply and reenter the queue for review and approval after achieving the missed net metering queue milestone(s). Net metering queue milestones must be met even if the system is not going to be net metered or if it is located in New Hampshire Electric Cooperative service territory. For applicants on a net metering capacity allocation waitlist, milestones will become applicable when the system has been granted a net metering capacity allocation. |
| 45.                                      | Extensions of Step 1 Approval Period                           | <ul style="list-style-type: none"> <li>• Must submit a written extension request at least 15 days prior to expiration of rebate approval.</li> <li>• Must explain reason for extension and show substantial progress throughout the entire approval period (e.g., evidence of active interconnection study, state and local permitting activities, equipment orders, etc.). Delays resulting from avoidable causes or intentional actions will not be considered grounds for extension.</li> </ul>   |
| 46.                                      | Transfer of Funds Between C&I Program Categories               | Evaluate on a quarterly basis or as necessary.   |

| <b>Table 2</b>  |   |   |
|---|---|---|
| <b>Category 2: Larger Solar Systems</b>                       |   |   |
| Item No.  | Terms and Conditions  | Description   |
| 1.  | Maximum System Size   | <ul style="list-style-type: none"> <li>Maximum 500 kilowatts AC and greater than 100 kilowatts AC.</li> <li>System capacity is based on the total capacity of the project as evidenced by interconnection application(s) submitted to the utility.</li> </ul>   |
| 2.  | Program Eligibility   | <ul style="list-style-type: none"> <li>Non-residential structure with a commercial meter and rate class, except for a multi-family residence of three or more units, if the system will serve the residential units in the building.</li> <li>Facility must be installed and become operational on or after May 6, 2016.</li> </ul>   |
| 3.  | Applicant Eligibility   | Installation cannot be located on or connected to a residence, except a multi-family residence with three or more units. Home-based businesses are not eligible for a C&I rebate.   |
| 4.  | Electric Utility Customer Eligibility                           | <ul style="list-style-type: none"> <li>The applicant or the end-use customer must be interconnected to a provider of electricity, pursuant to Puc 2508.03.</li> <li>Customers of municipal electric utilities are not eligible for an incentive because municipal utilities are not subject to the Renewable Portfolio Standard, RSA 362-F, and thus do not contribute to program funding.</li> </ul> |
| <b>Incentive Levels</b>                                       |   |   |
| 5.  | Incentive for New Solar Electric                                | <ul style="list-style-type: none"> <li>\$0.55 per watt AC, or 25% of total project cost, or \$175,000, whichever is less.</li> <li>Rebate is based on the lower of maximum rated output capacity (AC) of the inverter or the DC capacity DC of the PV panels, as determined under standard test conditions (STC).</li> </ul>  |
| 6.  | Incentive for Solar Thermal                                     | None  |
| 7.  | Incentive for expanded solar systems of any type                | None  |
| 8.  | Maximum incentive in combination with other incentives received | <ul style="list-style-type: none"> <li>Rebate in combination with other rebates or grants received from the utility or other programs, including other local, state or federal programs, shall not exceed 100% of the total cost of the system. (Includes federal corporate tax depreciation (MACRS), tax credits (ITC, PTC), and tax exemptions).</li> </ul>   |
| 9.  | Project \$ Cap  | \$175,000   |
| <b>Terms and Conditions Requiring Documentation at Step 1</b> |   |   |
| 10.   | Electric Meter Type and Rate Class                              | PV system must be connected to a commercial meter with a commercial rate class on a non-residential structure. Meter and rate class must have been in place for at least 12 months  |

| <b>Table 2</b>  |   |   |
|---|---|---|
| <b>Category 2: Larger Solar Systems</b>                             |   |   |
| Item No.  | Terms and Conditions  | Description   |
|   |   | prior to the date of Step 1 application submittal. Commercial meter and rate class must be maintained for at least 12 months after system installation. For new structures and new meters, applicant must prove that the predominant use of the structure and property will be commercial. A residential meter and rate class is permitted only for a multi-family residence of three or more units, if the system will serve the residential units in the building. A copy of the most current electric bill and the electric bill from 12 months prior to the Step 1 application date must be submitted for any existing service. |
| 11.   | Interconnection Application for PV                                  | A copy of the interconnection application(s) as submitted to the utility.   |
| 12.   | Applicant/Installer/Development Team cap                            | None.   |
| 13.   | Google Earth image/aerial photo of site                             | Google Earth image or similar aerial photo of installation site.  |
| 14.   | Panoramic photos of the horizon                                     | Only required if cannot provide an aerial image.  |
| 15.   | Certification of Compliance with all Terms and Conditions           | Applicant and Installer shall certify as to full compliance with all program terms and conditions, including those which are demonstrated through Step 2 application.   |
| <b>Other Terms and Conditions Requiring Documentation at Step 2</b> |   |   |
| 16.   | Final Executed Interconnection Application for PV systems           | A copy of the final executed interconnection application(s), including Exhibit B, must be submitted.  |
| 17.   | Photo of Entire PV System   | Photo showing all solar panels (so that they can be counted)<br>Photo of all inverters<br>Photo of utility meter<br>Photo of revenue grade production meter   |
| 18.   | Copies of Paid Invoices   | Copies of invoices showing payment in full of all system costs, unless amount equal to the approved rebate will not be paid until incentive has been paid to applicant.   |
| 19.   | Renewable Energy Certificate (REC) Eligibility and REC applications | Must meet REC eligibility criteria, submit a complete NH REC application, and become REC certified by NHPUC. Must submit REC application at the same time or prior to Step 2 application submittal.   |
| 20.   | Recertification of Compliance with all Terms and Conditions         | Applicant and Installer shall recertify full compliance with all program terms and conditions.  |
| <b>Terms and Conditions Requiring Documentation Upon Request</b>    |   |   |
| 21.   | Power Purchase Agreement for PV                                     | PPA is required if the name on the electric bill and the applicant name are different.  |
| 22.   | Shading Analysis  | Determine the shading losses using one of the following: <ul style="list-style-type: none"> <li>• Solar Pathfinder</li> <li>• Solmetric</li> <li>• Other model that is generally accepted by the industry</li> </ul>  |

| Table 2<br>Category 2: Larger Solar Systems |  |   |
|---|--|---|
| Item No.                                    | Terms and Conditions                               | Description   |
|   |  | and approved by NHPUC Sustainable Energy Division.  |
| 23.   | Energy Modeling for PV                             | <ul style="list-style-type: none"> <li>• Actual Estimated Generation must be greater than 80% of Optimal Estimated Generation-</li> <li>• Option 1 – PV Watts for both optimal and actual               <ul style="list-style-type: none"> <li>• For Optimal, assume tilt of 35°; azimuth of 180°; AC to DC ratio = DC capacity/AC capacity; and system losses of 14%.</li> <li>• For actual, use the same assumptions as optimal except use actual tilt and azimuth and system losses = 100% - {1 - [0.14 x (1 - shading losses (%)/100)]}</li> </ul> </li> <li>• Option 2 – Solar Pathfinder for both optimal (ideal) and actual. Assume ideal (optimal) is tilt of 35°; azimuth of 180°.</li> <li>• Other options – Models and assumptions that are generally accepted by the industry and approved by NHPUC Sustainable Energy Division.</li> </ul> |
| 24.   | Registration with the Secretary of State           | If the applicant, installer/development team member, electrical or plumbing company, or site owner is organized as a business or legal entity, then the entity must be registered and in good standing with the N.H. Secretary of State.  |
| 25.   | PV Panels Certification                            | The solar PV panels must be certified by a nationally-recognized testing laboratory as meeting the requirements of UL 1703.   |
| 26.   | Inverter Certification and Specification Sheet     | Inverters must comply with IEEE 1547 and UL 1741.   |
| 27.   | Lease Agreement                                    | If the owner of the site is not the applicant, then the site owner must demonstrate authorization through a lease agreement for the applicant to install the system on the site.  |
| 28.   | Energy Audit/Energy Benchmarking                   | Energy audit/benchmarking are not required; however, applicant must have been provided and reviewed detailed energy efficiency information available through the NHSaves program website.   |
| 29.   | Labor Warranty                                     | The installer's contract must include a five year labor warranty for the installation of the system.  |
| 30.   | Installation Contract Term Regarding Final Payment | The installer's contract must include a provision that requires final payment of amount equal to the approved rebate to be deferred until after receipt of incentive payment, <i>or alternatively</i> a binding obligation of the installer to refund to applicant amount equal to approved rebate if rebate not paid because of non-compliance with program terms and conditions.  |
| 31.   | System Schematic or Construction Drawings          | A system schematic or construction drawings (e.g., electrical one-line diagram for PV) must be prepared.  |
| 32.   | Permits and Approvals                              | All required permits and approvals, including, if applicable, land use approvals, alteration of terrain, endangered species,  |

| <b>Table 2</b>                          |  |   |
|---|--|---|
| <b>Category 2: Larger Solar Systems</b> |  |   |
| Item No.                                | Terms and Conditions   | Description   |
|   |  | wetlands, heritage, preservation, SWPPP, building, electrical, site plan, zoning, etc., must have been obtained.  |
| 33.                                     | Revenue Grade Production Meter for PV systems                      | A revenue grade production meter or equivalent necessary to meet REC eligibility must be installed for all systems.   |
| 34.                                     | Installation Contract (including any amendments and change orders) | Contract must include:<br>Applicant name and installer/development team names and contact information<br>Total cost of system<br>Payment terms and timing<br>Address of facility installation<br>Capacity of system (in AC and DC for PV)<br>5 year labor warranty<br>Final Payment of amount equal to approved rebate deferred until after receipt of incentive payment, <i>or alternatively</i> installer binding obligation to refund to applicant amount equal to approved rebate if rebate not paid due to non-compliance with program terms and conditions. |
| <b>Other Terms and Conditions</b>       |  |   |
| 35.                                     | System Cannot be Removed   | System cannot be removed from installation site for at least 10 years.  |
| 36.                                     | Rebate Payment   | Payment will be made to applicant, after submittal of complete Step 2 application and review by NHPUC, subject to potential full verification and/or onsite system inspection by NHPUC or its authorized third party contractor.  |
| 37.                                     | Inspection/Audit   | NHPUC or NHPUC-authorized third party contractor may inspect and/or audit the project and request performance data for up to 10 years following approval of the Step 2 application and payment of the incentive. If NHPUC determines that the applicant or system has violated any program terms or conditions that cannot be corrected or reconciled, as applicable, then the applicant will be required to repay the rebate, and the project will not be eligible for a program incentive.  |
| 38.                                     | Installer/Electrician/Development Team Suspension or Debarment     | Installer/Electrician/Development Team may be suspended or debarred from submission of any or some number of rebate applications, if found to have violated material program terms, performed poor quality installation, installed substandard equipment, or made material misrepresentations in applications. Suspension or debarment to be in effect for a specified number of months or years, depending on severity of violations found.  |
| 39.                                     | Step 2 Application Deadline  | 12 months after date of Step 1 approval   |
| 40.                                     | Milestones to Maintain Approval                                    | Project must meet all utility net metering queue milestones to remain approved for a rebate. If a milestone is missed, the applicant's approval will be surrendered, and the reserved rebate amount will be made available for use by   |



| <b>Table 2</b>                          |  |   |
|---|--|---|
| <b>Category 2: Larger Solar Systems</b> |  |   |
| <b>Item No.</b>                         | <b>Terms and Conditions</b>                      | <b>Description</b>  |
|   |  | other applicants. The applicant can reapply and reenter the queue for review and approval after achieving the missed net metering queue milestone(s). Net metering queue milestones must be met, even if the system is not going to be net metered or if it is located in New Hampshire Electric Cooperative service territory. For applicants on a net metering capacity allocation waitlist, milestones will become applicable when the system has been granted a net metering capacity allocation. |
| 41.                                     | Extensions of Step 1 Approval Period             | <ul style="list-style-type: none"> <li>• Must submit a written extension request at least 15 days prior to expiration of rebate approval.</li> <li>• Must explain reason for extension and show substantial progress throughout the entire approval period (e.g., evidence of active interconnection study, state and local permitting activities, equipment orders, etc.). Delays resulting from avoidable causes or intentional actions will not be considered grounds for extension.</li> </ul>    |
| 42.                                     | Transfer of Funds Between C&I Program Categories | Evaluate on a quarterly basis or as necessary.  |

**SERVICE LIST - EMAIL ADDRESSES - DOCKET RELATED**

Pursuant to N.H. Admin Rule Puc 203.11 (a) (1): Serve an electronic copy on each person identified on the service list.

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**FILING INSTRUCTIONS:**

- a) Pursuant to N.H. Admin Rule Puc 203.02 (a), with the exception of Discovery, file 7 copies, as well as an electronic copy, of all documents including cover letter with: DEBRA A HOWLAND  
EXEC DIRECTOR  
NHPUC  
21 S. FRUIT ST, SUITE 10  
CONCORD NH 03301-2429
- b) Serve an electronic copy with each person identified on the Commission's service list and with the Office of Consumer Advocate.
- c) Serve a written copy on each person on the service list not able to receive electronic mail.