



Residential- and Small-Scale Solar Hot Water Program Manual

Posting Date: May 1, 2018

The Massachusetts Clean Energy Technology Center (“MassCEC”) authorized ten million dollars (\$10,000,000) in funding for the Commonwealth Solar Hot Water program from 2012 through 2020. Through the Program, MassCEC provides rebates for the installation of solar hot water (“SHW”) systems at residential and small-scale commercial, industrial, institutional, and public facilities.

Through this Program, MassCEC seeks to support effective and high-quality clean heating and cooling technologies that provide consumer cost savings while reducing greenhouse gas (GHG) emissions. In addition, in the interest of increasing access to these technologies to all residents of Massachusetts, MassCEC is offering increased incentives for households that earn less than one hundred twenty percent (120%) of the state median income and for multifamily affordable housing.

This Residential- and Small-Scale Solar Hot Water Program Manual (the “Program Manual” or “Small-Scale Program Manual”) describes the process for applying for a rebate, the eligibility requirements, and the rebate levels. This Program Manual is applicable for residential projects and small-scale commercial, industrial, institutional, or public Projects that have eight (8) or fewer solar hot water collectors used for domestic hot water or twenty or fewer solar hot water collectors used for space heating. For projects with more than eight (8) collectors used for domestic hot water or more than twenty (20) hot water collectors used for space heating, please refer to the Commercial-Scale Solar Hot Water Program Manual, available on the [MassCEC website](#). The capitalized terms used in each of the Program Documents (e.g., Program Manual, Participant’s Agreement, Application, and Award Letter (collectively, the “Program Documents”)), including key definitions and definitions pertaining to eligible technologies, are defined in Section 4 of the Program Manual. Each of the Program Documents and additional program information are located on MassCEC’s website (<http://www.masscec.com/get-clean-energy>).

Note: This Program aligns with the Department of Energy Resources’ (DOER) current Alternative Portfolio Standard (“APS”) regulations and guidelines. From time to time the APS regulations and guidelines may change and as a result, this Program may be impacted to reflect such changes. More information about the APS is available here: <https://www.mass.gov/guides/aps-renewable-thermal-statement-of-qualification-application>

Table of Contents

1. How to Apply for a Rebate.....	2
2. Eligibility & Requirements.....	4
3. Rebate Structure.....	8
4. Program Definitions	12
5. General Conditions.....	15



1. How to Apply for a Rebate

All Applications must be submitted and approved by MassCEC prior to starting Project construction, and, to be eligible for a Rebate, construction may not commence until an Award Letter is received. Once the System Owner has decided to move forward with the Project, the Primary Installer should apply for a rebate on the System Owner's behalf.

Step 1-Understand Program Requirements: The System Owner and Primary Installer (together the "Applicant Parties") should read this Program Manual prior to submitting an Application. The Applicant Parties must determine if the Project will meet program requirements specified in Section 2 in order to qualify for a rebate, including site eligibility and project technology requirements.

Step 2-System Owner determines eligibility for the Income-Based Rebate Adder and, if applicable, applies for income verification: See Section 2.5 for information on Income-Based Rebate Adder Eligibility. The eighty percent (80%) Income-Based Rebate Adder is only available to households that are replacing or supplementing existing electric resistance, oil, or propane water heating systems. If applying for the additional rebate available through the Income-Based Rebate Adder, the System Owner should verify their income as described in Section 2.5. System Owners who use MassCEC's Income Verification portal should complete the income verification process before their Primary Installer submits their rebate Application. System Owners who are using an electric bill or fuel assistance letter should submit those documents with the Application. Affordable housing developers can apply for the Affordable Housing Rebate Adder if they can demonstrate that the units are committed or deeded to households below eighty percent (80%) of the state's median income, through a deed restriction or another type of documentation as determined on a case-by-case basis, as detailed in Section 2.6.

Step 3-Submit Application for Rebate: Applications must be submitted to MassCEC prior to starting Project construction, and construction may not commence until the Award Letter is received. The Application should be completed and submitted by the Primary Installer with the assistance and approval of the System Owner. Applications are submitted online through PowerClerk (www.PowerClerk.com). A PowerClerk account is required to apply for our program. If your company is new to the program, please email solarhotwater@masscec.com to be provided with a PowerClerk account. The Application must include the following:

1. **Application** – All information requested in the online PowerClerk form;
2. **Participant's Agreement**, signed by both the System Owner and Primary Installer;
3. **Electric bill** from Project Site clearly displaying the name of the utility, rate code, and service address. New construction projects can submit the electric bill at project completion;
4. **Schematic diagram** showing the proposed system with the number of collectors and the location of metering equipment;
5. **Income-Based Rebate Adder verification** (if applicable) – If applying for an Income-Based Rebate Adder, the Applicant should either:
 - include an electric bill with a low-income rate code or Fuel Assistance Letter of Acceptance with the Application; or
 - have received notice from the MassCEC income verification portal that they are eligible for an Income-Based Rebate Adder.



6. **W-9** (if applicable) – For tax-exempt (including but not limited to 501(c)(3) non-profit entities) and for-profit System Owners, a signed W-9 must be emailed separately to finance@masscec.com (do not copy solarhotwater@masscec.com). Residents and government entities do not need to submit a W-9; and
7. **Tax Exemption Certificate** (if applicable)—For all tax-exempt (including government entities) System Owners, a tax-exemption certificate or IRS tax-exemption determination letter must be uploaded to PowerClerk.

Step 4-Application Evaluation and Awarding: Upon receiving the Application, MassCEC program staff will send an email indicating one of the following statuses:

- the Application is complete;
- the Application is incomplete and further information is needed;
- the proposed Project is ineligible; or
- the proposed project has been rejected.

Each Application will be evaluated to ensure that the Project will meet the Eligibility and Project Requirements stated in this Program Manual for Feasibility Studies. MassCEC reserves the right to accept, assign design reviews, or reject Feasibility Study Applications based upon such factors as completeness, qualitative criteria, and available funding; to award less than the Applicant requests; and/or to award less than the maximum amount of funds potentially available through this Program.

MassCEC will notify each Applicant of its Application status within four (4) weeks of receipt of a complete Application barring extenuating circumstances. If the Application meets all requirements of this Program and funding remains available, MassCEC will issue an Award Letter to the System Owner and Primary Installer via email which will provide details on the Award amount.

Step 5-Complete Project: Project installation may commence only after receipt of the Award Letter. Projects must be completed within nine (9) months of the Award Date on the Award Letter. In the event of unusual delays, the installer may request a single three (3) month extension by emailing solarhotwater@masscec.com.

Upon Project Completion, the Primary Installer, in cooperation with the System Owner, will complete and submit PowerClerk's project completion fields and upload supporting documentation, including:

1. A copy of the Project's **invoice/s**;
2. **Photographs** of:
 - the collectors and tank installed;
 - the co-located solar photovoltaic system, if applicable;
 - the system component manufactured in Massachusetts, if applicable and if the application was submitted prior to December 15, 2016; and
 - the metering system, if applicable.

Step 6- Receive Rebate Payment: Rebates can be paid to the System Owner or Primary Installer, as directed by the System Owner in the Application. Rebates will be paid within four (4) weeks (barring extenuating circumstances), following MassCEC's approval of the submitted Project Completion Documentation.



2. Eligibility & Requirements

System Owners, Primary Installers, and Projects must meet the following eligibility requirements.

2.1. Project Site Eligibility

Projects at new and existing residential, commercial, public, and non-profit buildings are eligible for the Program. Project Sites must be located in a service territory that contributes to the Massachusetts Renewable Energy Trust. This includes locations served by the following electric utilities: National Grid, Eversource, Unitil, or one of the following Municipal Lighting Plants: Ashburnham, Holden, Holyoke, Russell or Templeton (please see <http://www.masscec.com/municipal-lighting-plant-communities> for the complete list).

New construction and existing building projects are both eligible for the Program. Systems supplementing or replacing existing water heating systems that use any fuel type (electricity, natural gas, oil, propane, etc.) are eligible for rebates. The Program allows for third-party owned systems, meaning the System Owner may be a different entity than the home or building owner. Solar pool heating is only eligible for commercial systems, not residential systems. A Project's function must include serving a year-round domestic hot water or process heat load and Project Sites must be occupied year-round.

All existing Project Sites must have had an energy efficiency audit completed within the past forty-eight (48) months or plan to undertake an efficiency audit within six months. MassCEC highly recommends that priority recommendations from the audit are implemented. For qualifying locations, free residential energy audits can be scheduled through Mass Save at www.masssave.com. New construction Project Sites do not require an energy audit, although an energy audit is still recommended.

Project installation may not commence until after the Application has been approved by MassCEC and the System Owner has received an Award Letter. Projects that have already commenced construction are not eligible for the rebate. The rebate may be combined with any other local, state or federal incentive, and Applicants are encouraged to do so where possible. However, MassCEC will not provide funding that would, in MassCEC's sole determination, exceed total Project costs. Total Project costs shall include all costs presented in the Application, less all other available incentives, including any state or federal rebates, subsidies, and tax incentives, discounted to present value where necessary. MassCEC will evaluate these situations on a case-by-case basis, and shall reserve the right to reduce any Award projected to exceed total Project costs by an amount sufficient to prevent the excess. Grantees must declare this rebate if applying for a Mass Save HEAT Loan. Applicants who have already received an Award are not permitted to forfeit their Awards in order to reapply under the new rebate structure.

Small-Scale Program

Projects at residential, commercial, industrial, institutional, and public Project Sites with either eight (8) or fewer collectors used for domestic hot water, or twenty (20) or fewer solar hot water collectors used for space heating should apply under this Small-Scale Program Manual. All other Projects should follow the requirements found in the Commercial-Scale Solar Hot Water Program Manual, available on [MassCEC's website](#).

2.2. Primary Installer Requirements

Installer Registration



Primary Installers must have a registered account on PowerClerk. Primary Installers should email solarhotwater@masscec.com to be set up with a PowerClerk account.

Primary Installers participating in the Program must have read and submitted a signed copy of the Primary Installer Agreement (available at the [Installer Resources](#) webpage).

Design Review

MassCEC may elect to consult an independent third party to review a Project's design. Primary Installers should be prepared to work with the reviewer to answer any outstanding questions about the Project's design.

Installation Inspections

MassCEC will send a third-party inspector to inspect at least two (2) completed projects for each Primary Installer. MassCEC reserves the right to inspect subsequent Project Completions at random or due to suspected issues. If the inspector detects an issue with an installation, MassCEC reserves the right to suspend current Applications and/or stop accepting Applications from that Primary Installer and/or its subcontractors.

2.3. Project Requirements

In order to be eligible for a rebate, Projects must meet the following requirements:

System Warranties and Certifications:

SHW systems must be whole systems (tanks, collectors, controls, and plumbing). Components must be new, and collectors must be certified to the OG-100 or OG-300 standard by the Solar Rating and Certification Corporation ("SRCC") or an accredited testing laboratory. SHW systems must be backed by a minimum ten (10)-year manufacturer's warranty for collectors, two (2)-year warranty for other system components, and two (2)-year comprehensive installation warranty.

Adhering to Local Plumbing/Building Code:

Installed systems must meet all applicable state and local laws and ordinances. In PowerClerk's project completion fields, the Primary Installer must attest that the Project has received a building and/or plumbing permit and has completed a satisfactory plumbing inspection by the local authority.

Technical Specifications:

All projects must meet the following technical specifications:

- Systems must include the installation of solar thermal collectors that transfer the absorbed solar radiation to a fluid passing through the collector(s).
- Collector area and mounting:
 - A Solar Pathfinder or comparable device must show that collectors are subject to at least five hours per day of unobstructed sunlight (seventy-five percent (75%) shade-free on an annual basis);
 - Collector tilt must follow manufacturer specifications;
 - Orientation must be between 90 degrees and 270 degrees true; and
 - Collectors must be secured according to manufacturer's recommendations.
- Storage: All systems must follow the manufacturer's recommendations regarding storage capacity.
- Plumbing:



- All systems shall include one of the stagnation methods specified in the Application form:
 - Advanced controller with vacation or holiday mode;
 - Advanced controller with thermal cycling function;
 - Heat dump radiator;
 - Steam back;
 - Pressure stagnation protection;
 - Hartgard; or
 - Other (requiring approval by MassCEC)
- All systems shall include one of the freeze protection methods specified in the Application form:
 - Direct forced circulation (open loop): Automatic freeze drain valve;
 - Indirect forced circulation (closed loop): Active closed-loop glycol;
 - Indirect forced circulation (closed loop): Closed-loop glycol or water drainback;
 - Thermosiphon: Closed-loop glycol;
 - Glycol drainback; or
 - Other (requiring approval by MassCEC)
- The Primary Installer shall provide assurances for freeze protection to at least negative twenty-seven (-27) degrees Fahrenheit in the case of pressurized systems, or nine (9) degrees Fahrenheit for drainback systems.
- Load offset: For systems that only serve domestic hot water, the percentage of load offset by the SHW system must be less than or equal to eighty percent (80%) of the total domestic hot water load that the system is serving.
Insulation: All systems must have insulation on all exposed and accessible hot water piping. Underground circulation lines must be below the frost line, or roughly three and a half (3.5) feet.

Deviation from Requirements

Although MassCEC typically does not allow deviation from these design requirements, certain site characteristics may lend themselves to alternate system designs. If for technical reasons, a design requirement cannot be met for a particular installation as determined by MassCEC, the Primary Installer may request a waiver from MassCEC. All variations must be explained in detail in the Project Notes field at the bottom of the Application. MassCEC may send these Applications to MassCEC's Third-Party Inspector for review and consideration, but in all cases, are subject to final approval by MassCEC.

2.4. Project Design Guidelines

The following design guidelines are not mandatory, but the Primary Installer may be asked to provide an explanation if they are not met:

- The storage tank should be at least as large (in gallons) as the Project Site's estimated daily use (in gallons per day); and
- The storage tank's volume (in gallons) should hold approximately 1.5 (one and a half) gallons per square foot of collector area.

2.5. Income-Based Rebate Adder Eligibility (Residential Projects)

In the interest of increasing access to clean heating and cooling technologies, such as solar hot water systems, to all residents of Massachusetts, MassCEC offers additional incentives for households with income below eighty percent



(80%) and one hundred twenty percent (120%) of the state median income. Eligibility thresholds are determined based on household size, as shown in the table below.

Table 1. Income-Based Rebate Adder Thresholds by Household Size

Household Size	80% of State Median Income	120% of State Median Income
1	\$47,347	\$71,020
2	\$61,916	\$92,874
3	\$76,484	\$114,726
4	\$91,052	\$136,578
5	\$105,620	\$158,430
6	\$120,188	\$180,282
7	\$122,920	\$184,380
8	\$125,652	\$188,478
9	\$128,282	\$192,574
10	\$131,115	\$196,574
11	\$133,847	\$200,770
12	\$136,579	\$204,868
13	\$139,309	\$208,964
14	\$142,041	\$213,062
15	\$145,240	\$217,860
16	\$153,880	\$230,820
17	\$162,520	\$243,780

To receive the Income-Based Rebate Adder, the System Owner must complete one of the following three income verification methods:

1. **Electric Bill:** Provide MassCEC with a copy of an Electric Bill with a low-income rate code from within the last six (6) months. National Grid, Unitil, and Eversource’s low-income rate code is R2 (or R4 for Eversource’s Residential Assistance Space Heating);
2. **Fuel Assistance Letter:** Provide MassCEC with a copy of a Fuel Assistance Letter of Acceptance from within one (1) year of Application date showing the date, System Owner’s name, and Project Site address. An example Fuel Assistance Letter can be found on [MassCEC’s website](#); or
3. **MassCEC Income Verification:** Complete a free income verification through MassCEC’s Income Verification portal (<http://masscecoverify.com>). The income verification process requires submission of a completed IRS Form 4506 - T for each adult tax filing (single, married filing jointly, married filing separately, and/or head of a household) within the household.
 - a. System Owners that are going through [MassCEC’s income verification portal](#) should select “MassCEC Income Verifier Approval” as the income verification method on their Application.
 - b. MassCEC’s Income Verification portal process takes approximately one week to verify income.
 - c. Income verification should be completed prior to the Application and will be valid for a period of one (1) year.
 - d. Once the income verification process is completed, MassCEC and the System Owner will receive an email confirming whether or not the System Owner is eligible for the Income-Based Rebate Adder. If the System Owner has received an email confirming income eligibility, the rebate Application can be



submitted to MassCEC. MassCEC is automatically notified of all System Owners who are eligible for the Income-Based Rebate Adder.

MassCEC's income verification portal is run by an independent third-party that meets stringent security standards. MassCEC will never have access to any Applicant's financial information or tax documents.

System Owners that are using MassCEC's Income Verification portal should complete the income verification process before their Primary Installer applies for the rebate. System Owners that are using an electric bill or fuel assistance letter should submit those documents with the Application.

2.6. Affordable Housing Adder Eligibility (Commercial, Non-Profit, and Public)

MassCEC offers additional incentives to affordable housing developments that are owned by commercial, non-profit, or public entities (see Section 3.2). Projects may apply for the Affordable Housing Rebate Adder if the System Owner can demonstrate that the Project's units are committed or deeded to households at or below eighty percent (80%) of the state's median income, using one of the following methods:

- 1) An eligibility letter from LEAN's Low-Income Multifamily (LIMF) Energy Retrofits Program. See <http://leanmultifamily.org/> for more details;
- 2) A deed restriction that explicitly states the development has reserved at least fifty percent (50%) of the units for households earning eighty percent (80%) or less of AMI. If it is not explicit, then Applicants will need to provide item 1, 3, or 4 instead;
- 3) For housing shelters, a letter from the Executive Director or another individual with signatory authority stating that the property is used as a housing shelter; or
- 4) Other forms of documentation as determined by MassCEC on a case-by-case basis.

Affordable housing developers may not take federal or state tax credits for the Project if they utilize the Affordable Housing Rebate Adder.

2.7. Solar Photovoltaic Co-Location Adder Eligibility

System Owners that have Solar Photovoltaic (PV) systems located on the same facility as the SHW system are eligible for the Solar PV Adder. The PV system can be either newly installed or previously existing, but must be fully installed at time of SHW Project Completion. The PV system can be owned by either the System Owner or a third party. The PV system must be located on the same property and be owned or under a long-term lease agreement by the same person or company. The PV system must also be grid-tied and at least 1 kW (DC) in power capacity. System Owners must provide photographic documentation showing both the PV system and SHW system located on the same facility with the Project Completion documents.

2.8. Metering Adder Eligibility

In order to be eligible for the Metering Adder, the meter must include monitoring equipment that either 1) measures the temperature at a minimum of two (2) points and determines the flow rate, or 2) is an enthalpy-based tank sensor (such as the Ohm Meter). Both meter types must have an interface accessible via the Internet. MassCEC will evaluate meter qualification on a case-by-case basis.

3. Rebate Structure



Annual funding is available on a first-come, first-served basis and may be limited. If funds are exhausted, additional funding may be added at MassCEC’s discretion. MassCEC will strive to provide three (3) months’ notice if it is anticipated that funds will become unavailable in the given fiscal year. MassCEC reserves the right to modify program incentives in future iterations of the program.

3.1. SRCC Rating

For the Base Rebate calculation method, MassCEC uses the Solar Rating and Certification Corporation’s (SRCC) OG-100 standard for all projects or OG-300 standard for domestic water heating projects only (Tables 2, 3, and 4). MassCEC accepts product ratings from either:

- SRCC: To find the rating of the collector, go to: <http://www.solar-rating.org/>; or
- International Association of Plumbing and Mechanical Officials (IAPMO): To find the ratings of the collector, go to: http://pld.iapmo.org/solar/rated_listings.aspx.

MassCEC calculates rebates differently depending on the standard the system is rated to. See Sections 3.2 and 3.3 below.

3.2. OG-100 Rebate Calculation

Small-Scale Residential Rebate Structure (OG-100)

Table 2. Small-Scale Residential Rebate Structure (OG-100)

	Standard Rebate	80%-120% Income-Based Rebate Adder	<80% of SMI Income-Based Rebate Adder
Base Rebate Formula	SRCC OG-100 rating x # of collectors x \$50	SRCC OG-100 rating x # of collectors x \$75	SRCC OG-100 rating x # of collectors x \$100
Base Rebate Adders	If applicable: <ul style="list-style-type: none"> • Solar PV Co-location Adder (\$500) 		
Maximum Rebate before Metering	30% of Eligible Project Costs, limited to \$3,000	35% of Eligible Project Costs, limited to \$3,500	40% of Eligible Project Costs, limited to \$4,000
Metering Adder	100% of metering equipment costs, limited to \$500		
Maximum Total Rebate	\$3,500	\$4,000	\$4,500

Note: The dollar value rebate caps shown in Table 2 apply to Projects that serve one residential unit. For each additional residential unit that the Project serves, the cap on the maximum rebate before metering would increase by \$1,500 while the percentage of eligible Project costs remains the same. For example, a Project serving three (3) units with no Income-Based Rebate Adders would be eligible for a maximum rebate before metering of twenty-five (25%) of eligible Project costs or \$6,000. With metering, that project could be eligible for a rebate of up to \$6,500. Two (2) to four (4) unit residential buildings may also submit separate rebate Applications for each unit if each unit will have completely independent systems (i.e., separate collectors, plumbing, and storage tanks).

Small-Scale Non-Residential Rebate Structure (OG-100)

Table 3. Small-Scale Non-Residential Rebate Structure (OG-100)



	Standard Rebate	Non-profit/Public entity Rebate	Affordable Housing Rebate Adder
Base Rebate Formula	SRCC OG-100 rating x # of collectors x \$50	SRCC OG-100 rating x # of collectors x \$100	SRCC OG-100 rating x # of collectors x \$135
Base Rebate Adders	If applicable: <ul style="list-style-type: none"> Solar PV Co-location Adder (\$500) 		
Maximum Rebate before Metering	30% of Eligible Project Costs, limited to \$10,000	50% of Eligible Project Costs, limited to \$20,000	75% of Eligible Project Costs, limited to \$30,000
Metering Adder	100% of metering equipment costs, limited to \$500		
Maximum Total Rebate	\$10,500	\$20,500	\$30,500

Base Rebate

To calculate the Base Rebate for an OG-100 certified system, MassCEC uses an average of the production ratings under “Category C, Medium Radiation” and “Category D, Medium Radiation,” measured in thousands of BTU/panel/day. This average in the production ratings is then multiplied by the number of collectors installed in a Project and a dollar value multiplier, as shown in Tables 2 and 3.

Base rebate = ((OG-100 Category C Medium Radiation rating + OG-100 Category D Medium Radiation rating)/2) x Number of collectors x Dollar value multiplier.

Dollar value multipliers are based on project type. The standard dollar value multiplier is fifty dollars (\$50), with a higher multiplier for Public or Non-profit Projects, Projects receiving Income-Based Rebate Adders (Section 2.5), or Projects receiving the Affordable Housing Rebate Adder (Section 2.6). Public and Non-Profit Projects are eligible to receive higher rebate levels because they are ineligible to receive state or federal tax credits. Public entities are defined as an instrumentality, authority, agency, department or political subdivision of the Commonwealth of Massachusetts, including municipalities. Non-profits are defined as organizations under Section 501(c) (3) of the Internal Revenue Code and registered with the Massachusetts Attorney General, Non-Profit/Public Charities Division.

The combined value of the Base Rebate and the Base Rebate Adders is subject to caps based on the total dollar value and the percentage of Project costs, as shown in Tables 2 and 3.

Base Rebate Adder

The following adder can be applied to the Base Rebate and is subject to the applicable rebate caps shown in Tables 2 and 3. See Section 2.7 above for eligibility requirements.

- Solar PV Co-location Adder: \$500

3.3. Solar Hot Water Space Heating Rebate Structure

The Program allows Projects to serve the space heating load of a building. Projects may include the installation of a solar thermal system to serve a space heating load exclusively (“Space Heating Only”), or in combination with a domestic hot water load (“Space Heating Combination”). All space heating base rebates are subject to the same SRCC OG-100 utilization and methods as described in Section 3.2

Space Heating Only Rebate



Space Heating Only Projects do not include a year-round load, therefore the dollar value multipliers for such projects differ than described in Section 3.2. Space Heating Only Rebate amounts are described for residences and small-scale non-residences in Tables 5 and 6, respectively.

Table 5. Space Heating Only Rebate Structure- Residential

	Standard Rebate	80%-120% Income-Based Rebate Adder	<80% of SMI Income-Based Rebate Adder
Base Rebate Formula	SRCC OG-100 rating x # of collectors x \$25	SRCC OG-100 rating x # of collectors x \$37.50	SRCC OG-100 rating x # of collectors x \$50
Base Rebate Adders	If applicable: <ul style="list-style-type: none"> Solar PV Co-location Adder (\$500) 		
Maximum Rebate before Metering	30% of Eligible Project Costs	35% of Eligible Project Costs	40% of Eligible Project Costs
Metering Adder	100% of metering equipment costs, limited to \$500		

Table 6. Space Heating Only Rebate Structure- Small-Scale Non-Residential

	Standard Rebate	Non-profit/Public entity Rebate	Affordable Housing Rebate Adder
Base Rebate Formula	SRCC OG-100 rating x # of collectors x \$25	SRCC OG-100 rating x # of collectors x \$50	SRCC OG-100 rating x # of collectors x \$75
Base Rebate Adders	If applicable: <ul style="list-style-type: none"> Solar PV Co-location Adder (\$500) 		
Maximum Rebate before Metering	30% of Eligible Project Costs	50% of Eligible Project Costs	75% of Eligible Project Costs
Metering Adder	100% of metering equipment costs, limited to \$500		

Space Heating Combination Rebate

The first three (3) collectors installed for a Space Heating Combination Project are calculated as described in Section 3.2 (and are **not** subject to the maximum rebate levels defined in Section 3.2). Additional collectors, beyond three (3), will be calculated as defined in Tables 5 and 6, depending on entity type. These rebate amounts will be added together to equal the Space Heating Combination Rebate and the total rebate is subject to the maximum rebate levels defined in Tables 5 and 6. Note: *Small-scale non-residential space heating combination projects may contact MassCEC, where appropriate, if those projects believe that this formula is not appropriate for their project and wish to apply under the Commercial-Scale Program.*

- Space Heating Combination Rebate:**
 (3 X SRCC OG-100 Average C/D rating X Section 3.2 dollar value multiplier) + (# of additional collectors X SRCC OG-100 Average C/D rating X Section 3.3 dollar value multiplier)



Space Heating Combination Rebate Calculation Example: Applicant A is a resident installing seven (7) solar thermal collectors with an average SRCC OG-100 rating of 19.3 to serve the purpose of space heating and water heating and is applying for a Space Heating Combination Rebate. Applicant A does not qualify for any income-based rebate levels and is therefore receiving the standard rebate.

Applicant A's rebate would be calculated as such:

$$(3 \times \text{SRCC OG-100 Average C/D rating} \times \text{Section 3.2 dollar value multiplier}) =$$

$$3 \times 19.3 \times \$50 = \mathbf{\$2,895}$$
 (not subject to any maximums)

plus

$$(\# \text{ of additional collectors} \times \text{SRCC OG-100 Average C/D rating} \times \text{Section 3.3 dollar value multiplier}) =$$

$$4 \times 19.3 \times \$25 = \mathbf{\$1,930}$$

$$\mathbf{\$2,895 + \$1,930 = \$4,825 \text{ total rebate}}$$
 (would be subject to maximum level defined in Table 5)

3.4. OG-300 Rebate Calculation (domestic water heating only)

While the standard rebate calculation method uses the SRCC OG-100 rating, the Primary Installer installing solar hot water collectors used for domestic hot water may request in the notes section of the PowerClerk application that an OG-300 rating be used instead. MassCEC program staff has the right to approve or reject such requests. The Base Rebate amount when utilizing the OG-300 rating is based on the expected annual energy production as calculated through the [SRCC OG-300 System Ratings Summary Page](#) for the proposed model with the location set to "MA-Boston." The resulting "Energy Savings in kBTU" designates the expected annual energy production. The OG-300 Base Rebate for residential and commercial projects is calculated by multiplying the expected annual energy production by the following factors:

Table 4. OG-300 Rebate Factors

Rebate Rate	OG-300 Rebate Factor
Base Residential/Commercial	\$0.21/kBTU
Income-Based Rebate Adder (80%-120% of SMI)	\$0.32/kBTU
Income-Based Rebate Adder (<80% of SMI)	\$0.43/kBTU
Non-profit/Public Entity	\$0.43/kBTU
Affordable Housing Rebate Adder	\$0.64/kBTU

If the Primary Installer requests to use the OG-300 rating, then program staff will verify and manually input the alternative incentive rating. Projects using the OG-300 rebate calculation method are eligible for the same adders as Projects using the OG-100 rebate calculation method and are also subject to the same percentage and dollar value rebate caps shown in Tables 2 and 3.

Contact Information: For questions on the Solar Hot Water Program, please visit the program webpage (<http://www.masscec.com/get-clean-energy>), email the Program mailbox at solarhotwater@masscec.com, or call 617-315-9300.



4. Program Definitions

80% Income-Based Rebate Adder: The increased incentive level for which System Owners with household incomes less than eighty percent (80%) of the state median income are eligible.

80 - 120% Income-Based Rebate Adder: The increased incentive level for which System Owners with household incomes between eighty percent (80%) and one hundred twenty percent (120%) of the state median income are eligible.

Affordable Housing Rebate Adder: The increased incentive level for which Projects that are affordable housing developments designated for households below eighty percent (80%) of the state median income are eligible.

Applicant: The Applicant is the Primary Installer who prepares and submits the Application on behalf of the System Owner. The Primary Installer is responsible to work with the System Owner to prepare and submit the Application.

Applicant Parties: The Primary Installer and the System Owner, who together are responsible for providing the content of and signing the Application.

Application: Application submitted on behalf of System Owner by Primary Installer for an Award.

Award: Rebate funding awarded to a System Owner or Primary Installer under the Program based on a submitted Application that has been approved by MassCEC.

Base Rebate: The fundamental component of the Award based on the SRCC rating of the Project's collectors (either OG-100 or OG-300) and the applicable dollar value multiplier. This portion of the Award is subject to applicable percentage and dollar value caps.

Base Rebate Adders: Adders that can be applied in addition to the Base Rebate, but are still subject to the applicable percentage and dollar value caps.

Grantee: The System Owner once the Award is made.

Payee: The Payee is the designee to receive the rebate for a Project that has achieved Project Completion. A System Owner may choose to have its Award paid directly to the Primary Installer. Payment is made for the work performed on the Project and does not convey ownership rights to the installed system.

Primary Installer: The Primary Installer is the primary entity responsible for the installation of the Project. The Primary Installer is directly responsible for turnkey project management, submission of the Application, and installation work, although aspects of the installation work may be sub-contracted.

Program Documents: The Program Documents consist of the Program Manual, Application, Participant's Agreement, and Award Letter.

Project: The solar hot water system.

Project Site: The building(s) being served by the Project.

Project Completion: The status of a Project at the stage when major Project components have been fully installed. Supplemental service or modifications do not change the Project Completion status.



Space Heating Combination Rebate: A Project that serves both a hot water load and space heating load of a building.

Space Heating Only Rebate: A Project that only serves a space heating load of a building.

System Owner: An individual who, together with the Primary Installer, applies to MassCEC for a Program rebate. The System Owner is the owner of the Project that is supported by the Program rebate.



5. General Conditions

MassCEC reserves the right to reject any Applications or Projects.

5.1 Notice of Public Disclosure

5.1.1 General Statement on Public Records

As a public entity, MassCEC is subject to Massachusetts' Public Records Law, codified at Chapter 66 of the Massachusetts General Laws ("Public Records Law"). Applicants acknowledge and agree that any documentary material, data, or other information submitted to MassCEC are presumed to be public records. An exemption to the Public Records Law may apply to certain records, including materials that fall under certain categories under a statutory or common law exemption, including the limited exemption at Massachusetts General Laws Chapter 23J, Section 2(k) regarding certain types of confidential information submitted to MassCEC by an applicant for any form of assistance. By submission of an application, Applicants acknowledge and agree that MassCEC, in its sole discretion, shall determine whether any particular document, material, data or other information is exempt from or subject to public disclosure. Thus, MassCEC urges Applicants to carefully consider what documents, materials, data and other information is submitted to MassCEC in connection with this Program.

In line with Public Records Law requirements, MassCEC generally considers the following types of information as exempt:

- Personal email addresses
- Personal phone numbers
- Electric bills
- LIHEAP Fuel Assistance Letter of Acceptance
- Eligibility letter for MassCEC's Income-Based Rebate Adders

5.1.2 C-THRU

System Owner agrees and acknowledges that MassCEC shall have the right to disclose the name of any Grantee and/or Payee, the amount of the payment under the Program and any other information it may deem reasonably necessary on C-THRU, the Commonwealth of Massachusetts' online database of state spending, or other applicable state spending website.

5.2 Contractual Requirements

The Participant's Agreement defines the legal terms that will govern the Award and sets forth the respective roles and responsibilities of the parties specifically as they relate to the Project that is the subject of the Award. The Participant's Agreement is designed to be executed upon submitting an Application and will become effective as indicated in the final executed Agreement. The terms and conditions of the Participant Agreement are non-negotiable. Accepting the Participant's Agreement at the time of Application does not entitle the Applicant Parties to an award for funding by MassCEC.

No grant funds may be used to pay rebates for Projects that reach Project Completion prior to the program launch date.

5.3 Waiver Authority

MassCEC reserves the right, at its sole discretion, to waive minor irregularities in submittal requirements, to request modifications of the Application, to accept or reject any or all Applications received, and/or to cancel all or part of this Program at any time prior to Awards.



5.4 Disclaimer

This Program Manual does not commit MassCEC to award any funds, pay any costs incurred in preparing an Application, or procure or contract for services or supplies. MassCEC reserves the right to accept or reject any or all Applications received, negotiate with all qualified Applicants, cancel or modify the Program Manual in part or in its entirety, or change the Application guidelines, when it is in its best interests.

5.5 Changes/Amendments to the Program Manual

The requirements listed herein are subject to change without notice to potential Applicant Parties. This Program Manual has been distributed electronically using MassCEC's website. It is the responsibility of Applicant Parties to check MassCEC's website for any addenda or modifications to the Program Manual to which they intend to respond. MassCEC, the Commonwealth of Massachusetts, and its subdivisions accept no liability and will provide no accommodation to an Applicant who submits an Application based on an out-of date Program Manual and/or related document.