



Town of Nantucket

Stimulating Ownership & Local Adoption of Renewables

SOLAR Rebate Program

Approved by Nantucket Board of Selectmen: May 24, 2017

Program Effective Launch Date: July 1, 2017

PURPOSE

The Town of Nantucket has established a rebate program to stimulate local adoption of renewable energy generating systems on primary, privately-owned, residential properties located on Nantucket. Rebates are provided to cover a portion of the costs of successfully-installed solar photovoltaic (PV) systems, making ownership more affordable for local residents.

Increased renewable energy generation will help to “green” the local electric supply and reduce summer peak load and costly capacity charges, resulting in lower electric supply and distribution costs for Nantucket electric ratepayers, and specifically those participating in **Nantucket PowerChoice**—a municipal electric aggregation program launched in March 2017.

PROGRAM GOALS

This program is intended to provide a number of key community benefits, designed to:

- Increase the capacity and affordability of residential solar energy systems on Nantucket
- Boost the amount of green power provided by the **Nantucket PowerChoice** aggregation program utilizing local renewable energy sources
- Reduce expensive capacity charges, thus electric prices for all aggregation program participants
- Decrease summer peak load, helping to defer the need for a costly 3rd undersea transmission cable; an investment historically paid for by Nantucket ratepayers
- Increase local electric grid resiliency and reliability
- Reduce local dependence on traditional fossil fuel generation, thereby lessening the island’s carbon footprint

BACKGROUND

Historically, Nantucket has been at the forefront of progressive ideas and self sufficiency. For nearly a century, the whaling industry established Nantucket as a global energy leader, due in no small part to the resourceful, cooperative, and progressive local community that supported the industry and shared in the boomtown profits. Now, nearly two centuries later, Nantucket is prospering again as a world-class tourist destination, with more people visiting the island than ever before and energy demands that continue to escalate. In fact, the demand for electricity on Nantucket is growing more than five times the Massachusetts statewide average, reaching an all-time record high “peak load” of 48 Megawatts (MW) in the early evening of Sunday, August 14, 2016; a 20% increase over the 40MW peak reached just four years earlier in 2012.

As a result, the community of Nantucket finds itself at an energy crossroads. If electricity demand continues to increase at this rate, a costly third undersea transmission cable could be necessary—a multimillion-dollar investment traditionally paid for by Nantucket ratepayers. While the Town of Nantucket is the largest single user of electricity on the island, it is in fact the residential sector that consumes 80% of the island’s electrical load. So as Town of Nantucket continues to investigate and pursue solar power generation, offshore wind, and energy storage opportunities, responsible energy use by the residential community, especially during the summer months, is the critical key to curtailing peak load and deferring the need for an additional cable (and the ensuing electric rate increases).

Over the past several years, the Town of Nantucket’s Energy Office has been dedicated to revitalizing a robust Mass Save energy efficiency program on Nantucket. Now that it is easier and more appealing for local residents to adopt energy conservation and efficiency measures— with over 2,000 Nantucket homes receiving an energy assessment between 2012 and 2016—it is time to shift attention toward increasing local renewable energy generation and, where feasible, energy storage systems in order to reduce the summer peak demand for electricity.

Although there is an especially compelling need to generate more local renewable energy, there are many unique obstacles and challenges to developing such systems on Nantucket. As an island, there is a lack of developable land, which often comes at a premium cost and is subject to competing local interests. Nearly half of the island’s land area is protected as open space and roughly 80% of the island land area is mapped *Priority Habitat*, home to thriving populations of rare species. The island’s geographic location naturally increases project construction costs, in certain instances by up to 50%. On Nantucket, not only is it more difficult and expensive to site land for renewable energy systems, but costs are also typically higher due to extra transportation and shipping logistics and fees, permitting requirements—such as those imposed by the Historic District Commission and the Massachusetts Endangered Species Act (MESA) regulations, and higher labor and insurance rates.

In acknowledging these special needs and challenges, the Town of Nantucket has established a local SOLAR Rebate Program to support a more sustainable energy future for the island, which benefits local residents and the community in which we live.

INTRODUCTION

Nantucket's Municipal Aggregation Plan ("Plan"), as approved by the Department of Public Utilities on November 22, 2016 (Town of Nantucket, D.P.U. 16-92) authorizes the Town of Nantucket to collect an operational adder of up to \$0.001 per kilowatt hour of electricity supplied through the aggregation program. As specified in the Plan, acceptable uses of the adder revenue include:

- Purchase of Renewable Energy Certificates ("RECs"); and
- Other forms of support for local energy projects that create benefits for program participants. (Plan, p. 6.)

In consultation with Town Counsel and Peregrine Energy Group—the Town's Aggregation Consultants—the Energy Office has recommended using the monies collected through the operational adder, approximately \$100,000 per year, to fund a renewable energy rebate program for Nantucket residents designed to fit within these parameters.

Approved at the 2017 Annual Town Meeting, a "Solar Rebate Program" Revolving Fund was established to collect and disperse the adder funds—in the form of a rebate—for eligible, internally-approved, residential solar PV systems. The rebates provided under this program are intended to carry out a public purpose of support by increasing energy efficiency and stimulating renewable energy production on Nantucket. On May 24, 2017 the Nantucket Board of Selectmen unanimously approved the establishment of the SOLAR Rebate Program by authorizing the implementation of the operational adder, effective July 2017.

SATISFYING DPU REQUIREMENTS

There are at least two ways that the SOLAR Rebate Program can provide benefits for aggregation program participants and thereby meet the requirements of the DPU approval and of municipal finance law: the program can be structured to reduce capacity costs, and thus prices, and to acquire local Renewable Energy Certificates (RECs).

Reducing Capacity Costs

Generating more renewable energy, specifically solar power, on Nantucket helps to reduce electricity prices for all participants in the aggregation program. More than 1/3 of the cost of electricity is determined by a single component of electricity costs – the cost of capacity. The cost of capacity is determined by customers' electricity use at the specific time of the system peak, which typically occurs on a hot day in July or August. Since there is a single electricity supply price for all customers within the aggregation, that price is determined by the sum of the capacity costs of all program participants.

Residential solar PV systems have the greatest potential to reduce capacity costs. Since solar production is highest at the time of system peaks (summer days), installing more solar power generating systems reduces the amount of electricity that Nantucket will draw from the grid during those peaks, thereby reducing capacity costs and prices for all program participants.

Importantly, solar energy also reduces the ratio of capacity costs to total kilowatt hours (kWh) used by the aggregation. Capacity costs are fixed charges, but they are converted into kWh charges by dividing those fixed charges by the total kWh consumption. This means that customers that use a lot of electricity at the time of system peak, but relatively less over the rest of the year, increase costs for everyone. By contrast, customers that use relatively less at system peak than they do over the rest of the year, reduce costs for everyone.

Since solar PV systems produce the most power in the summer months (time of system peak) and less during the rest of the year, increased solar capacity will improve the ratio of the capacity costs in the aggregation, thereby lowering prices for all program participants.

Renewable Energy Certificates (RECs)

The DPU specifically approved using the adder income to purchase Renewable Energy Certificates (RECs). The aggregation must buy RECs in any event to meet the requirements of the state Renewable Portfolio Standard. By using the adder to stimulate the development of new solar generating systems on the island, the aggregation will be able to acquire RECs generated from local Nantucket projects. This enables all program participants to benefit from locally-produced renewable energy.

PROGRAM ELIGIBILITY

The Town actively supports opportunities for homeowners to maximize the energy efficiency of their homes and therefore will require that a Mass Save home energy assessment be completed within the last three years in order to qualify for a SOLAR Rebate.

Other eligibility requirements include:

- Primary residence where work is performed must be owner-occupied and located in Nantucket.
- System must be paid in full
- Applicant must participate in the **Nantucket PowerChoice** aggregation program for a minimum of 6 months prior to application submission, and shall, as a condition of rebate award, commit to continuing to participate in said aggregation program
- All work must have been completed (as evidenced by “Authorization to Interconnect” notification) within the previous **180** days from the date the application is received at the Town Administration office, as evidenced by the date/time stamp.
- The applicant agrees to allow **Nantucket PowerChoice** to acquire RECs generated by solar PV system.
- The applicant must complete all required forms and must execute any and all agreements as required by the Town of Nantucket.

REBATE CRITERIA

The Town of Nantucket has established the following criteria for Nantucket residents to apply for a SOLAR Rebate. Rebate applications will only be considered when the following has been completed and supplied:

- Completed Rebate Application
- Supporting documentation:
 - A copy of a Mass Save home energy assessment report that includes completed and recommended energy efficiency improvements, performed within the last three years
 - Copy of the most recent National Grid electric bill (all pages). The **Nantucket PowerChoice** supplier must be listed under “Supply Services.”
 - Copy of PV System “Certificate of Occupancy” issued by the Town of Nantucket Building Department
 - Copy of National Grid’s “Authorization to Interconnect” notification
 - Installer contract, with inverter and panel specs, and corresponding invoice (s)
 - Proof of payment **MUST** be submitted. Valid proof includes receipts, copy of cancelled check (front and back) and/or credit card statement(s). Applications will not be considered without valid proof of full system payment.
 - Proof of property ownership (recorded deed), showing Rebate Applicant as a beneficiary
- Signed Terms & Conditions form

LIMITATIONS

- Rebates are awarded on a first come, first served basis to applicants, as funds are available.
- Multiple applications may be permissible; however each Applicant and each property may only receive up to the maximum rebate value for a solar-PV system (**\$2,500**). The rebate program may continue from year-to-year, at the discretion of the Town, for as long as the operational adder continues to be collected as approved by the D.P.U.
- For rebates above the Federal IRS limit, residents will be required to fill out a W-9 and will receive a 1099 from the Town.
 - IRS Publications can be found here: <https://www.irs.gov/forms-pubs>
 - W-9 Form can be found here: <https://www.irs.gov/pub/irs-pdf/fw9.pdf>

Note: The program offers, restrictions, rules, and regulations are subject to change.