



Annual Report on NH Solar Shares

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Solar Energy Produced to Date




The 28.8kW solar picnic area in Plymouth, NH beside the Common Man's Frosty Scoops Ice Cream Stand has generated 3.128MW from October 29, 2018 to December 31, 2018. Unfortunately, this time period has seen above average rain and snow so we look forward to sunnier weather!


2018 Energy Production Report

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NH Solar Shares at Frosty Scoops
www.nhsolarshares.org

Plymouth, NH

 Rectangular Snip

This report provides energy production for 2018.

Month	Energy Produced
October 2018	88.9 kWh
November 2018	1,030.7 kWh
December 2018	2,008.9 kWh
Total	3,128.6 kWh

The number of RECs produced during the calendar year

The PV array produced (3) RECs in 2018 since it was only in operation for two months of the calendar year. These RECs were purchased by the NH Electric Cooperative.

LMI Participants and Direct Benefits received through NH Solar Shares

There are currently 10 participants for the NH Solar Shares' Plymouth array. All 10 participants are low income and fall within 60% of the state's median income. The participants are known as Shareholders. They each receive a share (1/10) of the solar production every month for two years. There is no cost to participate other than a commitment to the individualized energy education program.

For 2019, the net direct benefit received by each shareholder is a \$25 monthly credit on their electric bill. The bill credit began on their January NH Electric Cooperative (NHEC) electricity bill. At the end of each year (in November) the dollar amount for each share for the following year will be determined using the preceding 12 months' actual solar production.



The other direct benefit to Shareholders is the energy education program. This fun program is designed to educate and motivate shareholders to look for new ways to reduce their energy use. Shareholders will receive a quarterly newsletter with energy saving tips and will be invited to participate in 4 – 5 Shareholder meetings (work days etc.) a year as well as other events put on by PAREI. NH Electric Cooperative will partner with NH Solar Shares to help Shareholders take advantage of their weatherization and EE programs.

At our first meeting, shareholders learned how to figure out their annual electricity usage and shared personal energy saving tips and tricks with one another. Each of us committed to

three energy saving goals to undertake and report back to one another at the next meeting such as putting foam behind our electricity outlets, doing laundry in cold water and checking the temperature in our refrigerators to see if they were too high using a candy thermometer. Two shareholders won a 3 minute shower timer to try out.

NH Solar Shares hired a part-time program coordinator (Paula Merrill – upper right in above photo) who has reached out warmly to each shareholder, gotten to know them individually and has shared with them community resources to help address their barriers to participating fully in NH Solar Shares. The program coordinator and fellow shareholders serve as a new community network for one another and genuinely appear excited to work with one another as the first group of Solar Shares shareholders. Soon they will be working as a team to identify goals to complete the educational signage and activities for the solar site this Spring.

Explanation of direct benefits provided to shareholders.

The Solar Shares model includes a direct benefit to shareholders of between 85% and 100% of the value of the projected solar generation for their assigned array. For the first Plymouth array site the solar value projection ranged between \$23.72 to \$27.91 a month for ten participants. For simplicity and program marketing reasons we chose to use a round number of \$25 for the first year of solar credits which was within the range of our NHPUC Renewable Energy Fund Grant's goal. In year two of the program our plan is to base the solar credit on 100% of the value of the solar production from the date of commissioning, October 29, 2018 to November 30, 2019. From there on we will continue to

use the last day in November as our anniversary date for setting the following year's solar credit which will fall between 85 and 100% of the value of the solar production.

NH Solar Shares Expenses and Fundraising

The initial multi-year phase of NH Solar Shares is to build three community solar installations in central New Hampshire totaling over 120kW of Solar PV. Program operations and project development, design, construction, maintenance and decommissioning of the first three solar arrays and the energy education program (for 10 years) is estimated to cost \$515,000. To date over \$240,000 has been raised toward this initial fundraising goal that has funded the development of the model, program operations, outreach and fundraising materials (including a website and Facebook page), a new staff position for a part-time program coordinator and the inaugural array: a 28.8kW solar picnic area consisting of three ground mount arrays and two solar pavilions at the Frosty Scoops Common Man Family of Restaurants in Plymouth, NH. They were built by Revision Energy, Mauchly Electric, PAREI and over 35 volunteers. The solar project design is underway for the second Solar Shares array in Warren, NH which will range in size from 20 – 25kW. Over 50% of the budget for the second array has been raised or pledged as of 2/28/19.

The construction of the 28.8kW solar picnic area's ground mounted solar arrays and solar pavilions including architectural services, tree removal, a new electrical service, permitting and the 10 year maintenance plan came to \$128,807, originally budgeted at roughly \$115,000. (The show case high quality pavilion construction, more extensive site prep and concrete pads were costs outside the original budget.) This total (\$128,807) does not include the cost of project/model development, marketing, participant recruitment, fundraising, office supplies, printing and administrative costs. Since June of 2016 when PAREI started developing the concept until December 31, 2018, the NH Solar Shares program has cost \$187,624 including building the first (Plymouth) array. This amount (\$187k) includes a \$6,000 set aside for future maintenance on the array but does not include the free technical assistance received through DOE's Solar in Your Community Challenge which paid for such things as website development, material development, energy education and participation guidelines, and a lease template; items that will reduce the future cost of running NH Solar Shares.

Certification of income verification conducted for each LMI participating customer – explain process.

Solar Shares chose to set our program's income criteria at 60% of state median income for 2018 because that is the 2018 NH Fuel Assistance and Electrical Assistance (EAP) Income Guideline. This is above the 200% federal poverty income guideline.

This means a family of four can make \$63,386 annually. See more information here: <https://www.nh.gov/osi/energy/programs/fuel-assistance/eligibility.htm>

Seven Solar Shares participants were current recipients of the electrical assistance program (EAP) verified by Tri County Community Action Program and were approved again for 2019. NH Electric Cooperative verified that these seven participants were receiving EAP. The eighth Solar Shares' participant lives in Low Income Multi Housing and gets a fuel subsidy through a rent deduction and she provided us with her housing acceptance letter for proof of low income. The ninth Solar Shares participant is the recipient of a Habitat for Humanity house here in Plymouth in 2018. The tenth and eleventh (one will be wait listed) Solar Shares' participants are also a new applicant for NH Fuel Assistance and are waiting for their official acceptance letters.

A local church reached out to NH Solar Shares and has offered to work with us on helping Shareholders stay current on their bill as long as it doesn't "get too out of hand". Currently NH Solar Shares and NHEC requires that the Shareholders at the beginning of each quarter be in good standing on their electric bill. If not, this is the time we will work with the Shareholder and Church to resolve the outstanding bill. The Shareholder can be in arrears for the next two billing cycles and still receive the on-bill solar credit. We are in the process of thinking through our terms and conditions for Shareholders that are frequently in arrears so are practices around this issue are consistent and fair.

Ownership of PV system

NH Solar Shares remains the owner of the solar PV picnic pavilions, solar equipment and the ground mounted structures. We lease the space from Alex Ray from the Common Man Family of Restaurants for \$0.00 per year. The PV system, electrical system and the ground mount structures are insured by NH Solar Shares.

Description of any changes made to the overall program model since Spring, 2018.

Early in the Solar Shares model development we explored the idea of adopting a "Pay the Share Forward" process. This idea has been received enthusiastically by current shareholders and they are inspired by the idea of passing on their share to another income eligible individual or family. So we plan to make this part of our program model. If shareholders can't identify someone to pass their share on to, program organizers will recruit new applicants.

NH Solar Shares early on included a goal to reserve 3 – 4 slots for families in ROC communities or multi affordable housing units. Despite heavy marketing to two ROC communities in our region we only received one application from a ROC community member and this person did not follow through with the application steps. We have one participant from a LI affordable housing development.

Originally the plan was that Solar Shares' participants could not be in arrears on their electric bill. Knowing the solar credit would be helpful to the participant to meet their electric bill, we worked with NHEC to agree to allow the participant to be in arrears for up to two consecutive months within one quarter and still receive the credit during that time.

The Solar Shares Model is Solidly Underway

From the start of the model's development, careful attention was given to the program's development with an eye to longevity. We have come a long way. We have a logo, website, Go Fund Me page, a banner, poster, hats, business sponsorship publicity process, a small donor fundraising campaign called "Buy your Carbon Here" and a detailed participant application process complete with an application, poster and on-line survey. Recently we have incorporated the Solar Shares program information and the website into the new PAREI website. We have a template for the quarterly Shareholder newsletter, a lease with property owners, access to an artist who produced beautiful artistic renderings at a reasonable price and an architect that now better understands solar PV energy the community feel we want for our projects. We also have a board, membership and volunteers who are now deeply familiar with the model's aspects and committed to supporting the building of two more arrays and later the model in other NHEC communities outside the Plymouth region.



NH Solar Shares Inaugural Array Ribbon Cutting November 9, 2018