

Rhode Island Low-and-Moderate Income Research Survey: Office of Energy Resources

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Introduction

In 2017, Governor Raimondo issued an initiative with a goal of 1,000 megawatts (MW) of clean energy for Rhode Island by 2020. The Rhode Island Office of Energy Resources (OER) is working to ensure that this goal is met and that solar is an option for all Rhode Islanders. This requires new approaches to solar, including community solar opportunities for customers that do not have a traditional “good site” for solar, tenants of multifamily buildings, condo owners, and low/moderate income (LMI) households.

Community solar is an arrangement in which multiple customers share the electricity or the economic benefits of solar power from a single solar array. The primary purpose of community solar is to allow members of a community the opportunity to share the benefits of solar power even if they cannot or prefer not to install solar panels on their property.

Through a grant from the U.S. Department of Energy’s Solar Energy Technologies Office State Energy Strategies (SES) program, OER is expanding the state’s efforts to make solar power more accessible to LMI households. The Clean Energy States Alliance (CESA), a national nonprofit organization, coordinates this multi-state project to expand market penetration of solar power among low- and moderate-income residents and communities. The grant supports market expansion activities in five states – Connecticut, Minnesota, New Mexico, Oregon, and Rhode Island – plus the District of Columbia.

Consumers can potentially save money by using solar power to generate electricity in their homes, but the initial cost of installing solar panels, home design complications, rental unit barriers and lack of access to information about clean energy options all present barriers, especially for lower income households. Based on OER’s interviews with developers that are launching community solar projects in Rhode Island, community solar subscribers could save approximately 10% on their energy bills while participating in clean energy efforts. OER has developed a series of initiatives under this grant to reach low- to moderate-income (LMI) residents, including developing a community solar marketplace website where customers can learn about community solar, including consumer protection information, and connect with community solar subscription opportunities. OER is also working with various community leaders and organizations across the state to create outreach materials, conduct “train the trainer” meetings with local community leaders and hold meetings in community centers in order to disseminate community solar information in LMI communities.

In mid-2017, the state of Rhode Island launched two community solar programs: the Community Remote Net Metering Pilot (CRNM) program and the Community Remote Distributed Generation

(CRDG) program. Both programs have proven to be popular with developers. Between the two programs, over 30 MW of community solar are currently under development.

While some community solar programs in other states include specific provisions to encourage participation by LMI customers, neither the CRNM program nor the CRDG program includes an LMI carve-out or an explicit goal of targeting LMI customers. However, a third program, the Community Renewables Program, which provides incentives to developers in the CRNM program, includes a higher incentive for developers who sign up low-income customers. Community solar developers will receive the grant funding upfront, including \$300 for each participating standard residential customer (National Grid Rate Code A-16) and \$500 for each participating LMI customer (National Grid Rate Code A-60). A-60 customers are National Grid customers that qualify for a reduce electric rate based on income. The developer will pass through the per customer grant as a subscription fee reduction to customers. This upfront funding should provide means and support to help mitigate the costs associated with customer acquisition for the developer and provide a benefit to customers¹.

In order to ensure that OER's outreach initiatives under the SES program are effective in supporting LMI customer access to Rhode Island's community solar opportunities, OER conducted an online survey of A60 customers in partnership with National Grid. OER's Shauna Beland (Chief, Program Development) worked with environmental justice consultant Nicole Hernandez Hammer to develop an initial set of survey questions. The focus of the survey was to gather information about:

- The degree of awareness regarding community solar in order to better design web content and outreach materials.
- LMI interest in participating in community solar and overall interest in clean energy and energy efficiency opportunities.
- Best ways to connect with LMI customers (i.e. – best time of day, how close to home, language needs, etc.).
- Information regarding a need for an LMI carve out.

The survey was reviewed by the Office of Sustainability for the City of Providence, the Racial and Environmental Justice Committee (REJC) of Providence, Green Energy Consumers Alliance and CESA. The survey was reviewed, edited, programmed, hosted and distributed via email by National Grid. The survey consisted of 18 questions (Appendix A) and participants did not receive incentives for their responses. Responses were anonymous. Between March 20th and 29th, the survey was sent to 11,055 A-60 customers via email, using the National Grid Survey System and Qualtrics software.

Key Findings

According to National Grid, as of July 2018, there were approximately 50,000 customers receiving A-60 reduced energy cost benefits. The survey was sent to all the available (11,055) A-60 customer email

¹ For more information on the Community Renewables program visit:
<https://commerceri.com/financing/renewable-energy-fund/>

addresses. Of those, 581 participants started the survey, and 388 completed the survey, yielding a 5.3% and 3.5% average response rate respectively. The average time to complete the survey was 7 minutes.

LMI customers' awareness of community solar

To gauge awareness of community solar, customers were asked how much they knew (a lot, a little, or not aware) about community solar, rooftop solar, clean energy options, energy efficiency and heat pumps (question 4 of the survey, see Appendix A). Overall awareness of community solar was low among A-60 customers. Only half know at least a little about community solar compared to three-quarters knowing at least a little about rooftop solar. In question 12, customers were asked if they feel there is enough information available online about Rhode Island's solar energy options. Over half "don't know where to begin" accessing online information about solar energy, and a third of those are just waiting for the opportunity to be presented with this information about community solar. This indicates that there is a desire to increase awareness of clean energy options among Rhode Island's LMI residents.

LMI customers' interest in community solar

In this survey, participants were given the following definition of community solar and asked a series of questions on interest in and desired benefits from community solar:

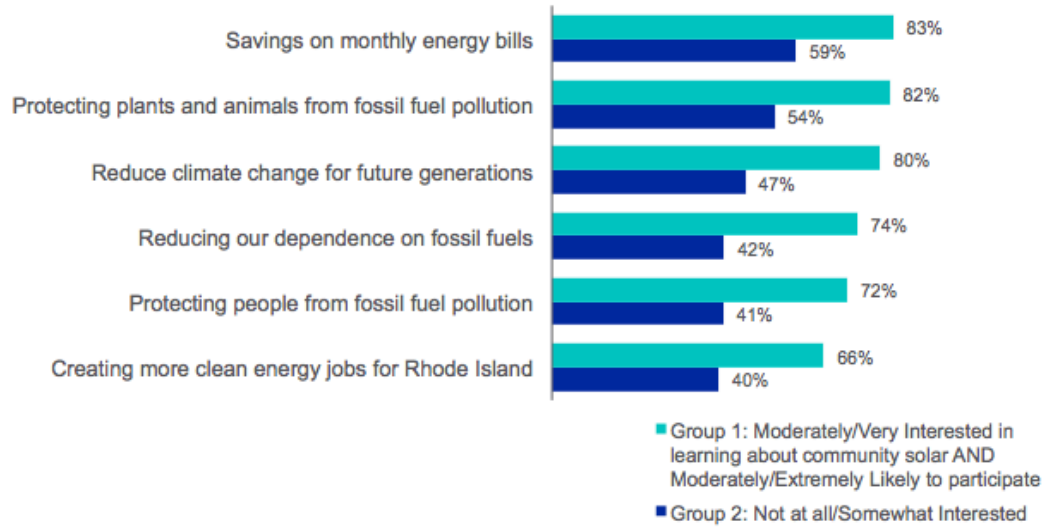
"A community solar project is a large solar electric system whose electricity is shared by more than one household. The primary purpose of community solar is to allow members of a community the opportunity to share the benefits of solar power even if they cannot or prefer not to install solar panels on their property. Project participants benefit from the electricity generated by the community solar farm, which costs less than the price they would ordinarily pay for their utility."

The high overall response rate to this survey, and the responses themselves, indicate a significant degree of interest in community solar among A-60 customers. 37% of responders were very to moderately interested in community solar. 74% of responders indicated that they frequently worry about energy costs. In the comments section, one responder wrote, "I love the idea but I have no extra money in my budget so being as cheap or cheaper than my usual bill is VERY important." These results are in accordance with the feedback we have received from the REJC on the growing interest of low-income residents in both savings and environmental benefits of solar energy in general. In fact, while A-60 customers indicated that interest in saving on energy costs mattered most, concern for protecting the environment was a close second.

Question nine in the survey asked customers to rate the following benefits of Community Solar.

Energy bill savings are important but environmental benefits are also important

Ratings of community solar benefits differentiated by interest level and likelihood of participating in community solar

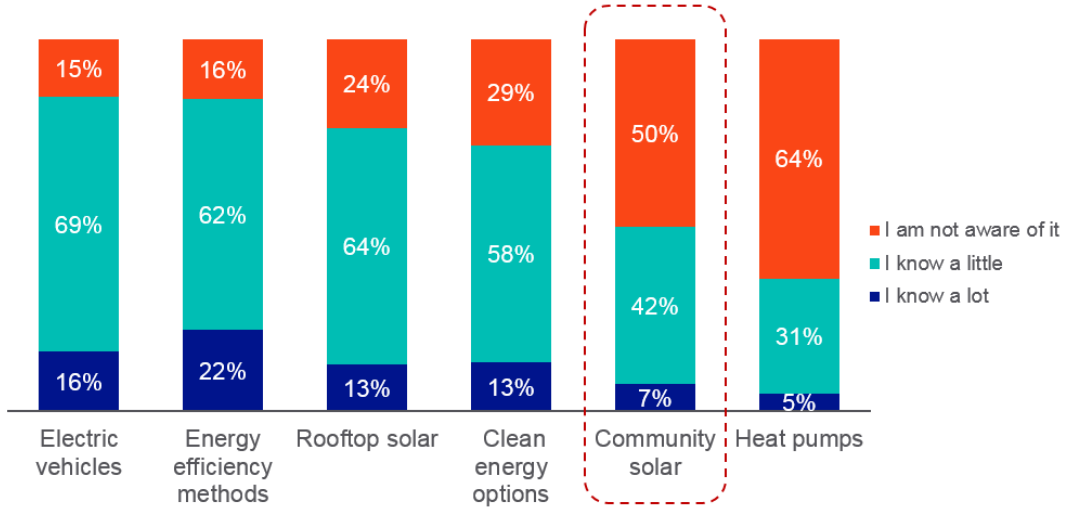


Source: Rhode Island Low and Moderate Income Solar Research, March 2019

Figure 1: Q9 As you feel they are important to you, please rate the following benefits of participating in a community solar project. %Extremely Important Cut by interest in community solar in Q5 and Likely to participate in Q6; Base=122 (Interested & Likely); 240 (Not at all/Somewhat interested)

Community Solar Awareness in Split 50/50

Awareness



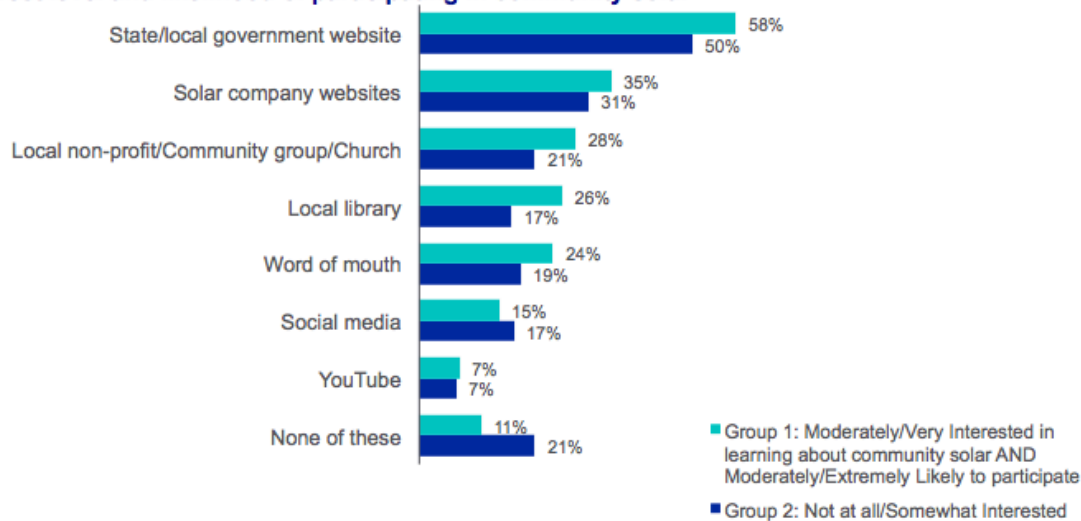
Source: Rhode Island Low and Moderate Income Solar Research, March 2019
 Figure 2: Q4 How much do you know about each of the following?
 Base=410 to 421 (varies because answers are not required)

Best ways to connect with A60 customers

Respondents indicated that they viewed state/local government as the most trusted source of community solar information and solar company websites as the second-most trusted source. This identifies the importance of state outreach efforts and initiatives. That information in conjunction with responses to question 13 (Format for learning about community, e.g. in-person, online etc.) reveal that customer prefer online communication as the preferred method of contact. This supports OER’s efforts to-develop a community solar website that connects users to community solar project websites. Local non-profits/community groups/churches are the third-most trusted source of information about community solar. This supports OER’s community solar outreach efforts in partnership with trusted local non-profits and community leaders.

State/local government website is the most trusted source for information about community solar

Most trusted sources about community solar differentiated by interest level and likelihood of participating in community solar



Source: Rhode Island Low and Moderate Income Solar Research, March 2019

Figure 3: Q10 If you were to search for information about clean energy, which of the following do you trust most as a source for that information? (Select up to 3) Cut by interest in community solar in Q5 and Likely to participate in Q6; Base=122 (Interested & Likely); 240 (Not at all/Somewhat interested)

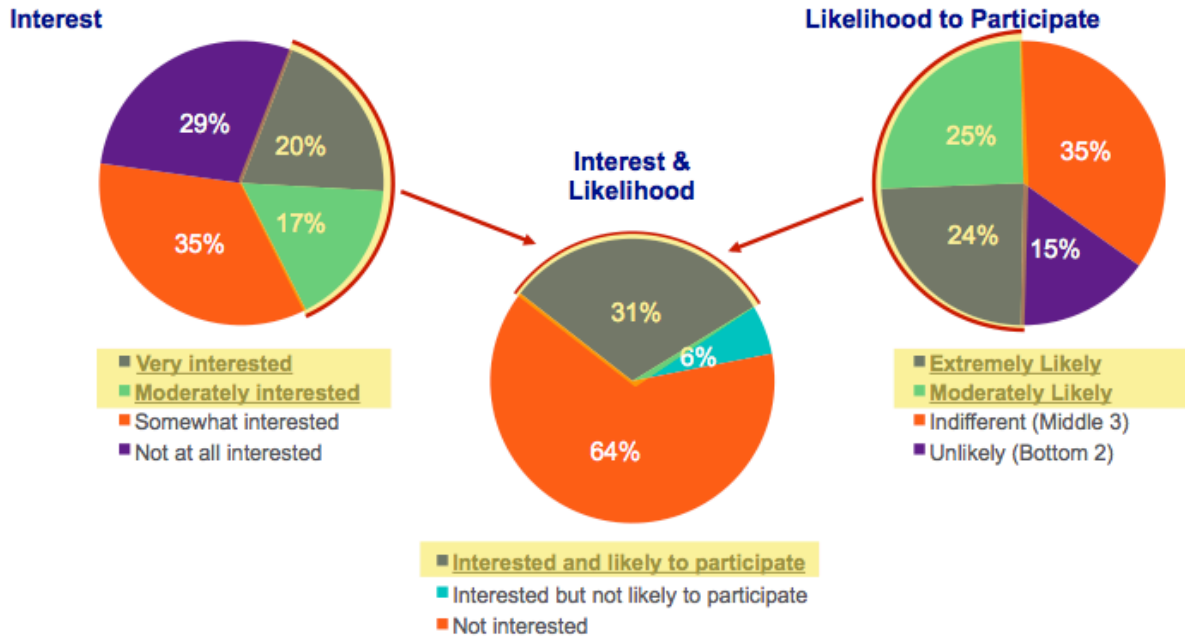
Respondents also indicated that they prefer meetings between 30 minutes and one hour in length and are rarely interested in meetings longer than two hours. Indicating, their free time is at a premium. Targeted community meetings should be sensitive to this. They would be willing to travel within a five-mile radius of their home, but most would not go over 15 miles to a meeting. Approximately 6% of respondents speak Spanish at home as their primary language. This would indicate that some Spanish language materials and a Spanish language version of this survey would be useful. This information provides a logistical framework for conducting community outreach meetings.

Indicators for an LMI community solar carve-out in future legislation

Most states that offer community solar include an LMI carve-out (state mandated allocation) in the range of 10%-30%.² This percentage can be correlated to poverty rates but is often a result of negotiation in the legislative process. Rhode Island does not have a carve-out requirement for community solar projects. This survey indicates that a potential carve-out would be warranted based on A-60 customer interest and likelihood to participate as well as the need to reduce energy cost. This indicates a substantial and ready LMI customer base for community solar developers to engage, and an opportunity for LMI customers to participate in clean energy while reducing energy cost burdens.

² <https://www.cesa.org/resource-library/resource/design-and-implementation-of-community-solar-programs-for-low-and-moderate-income-customers>

Combining *interest in community solar* and *likelihood to participate* to identify A60 customers projected to become community solar subscribers

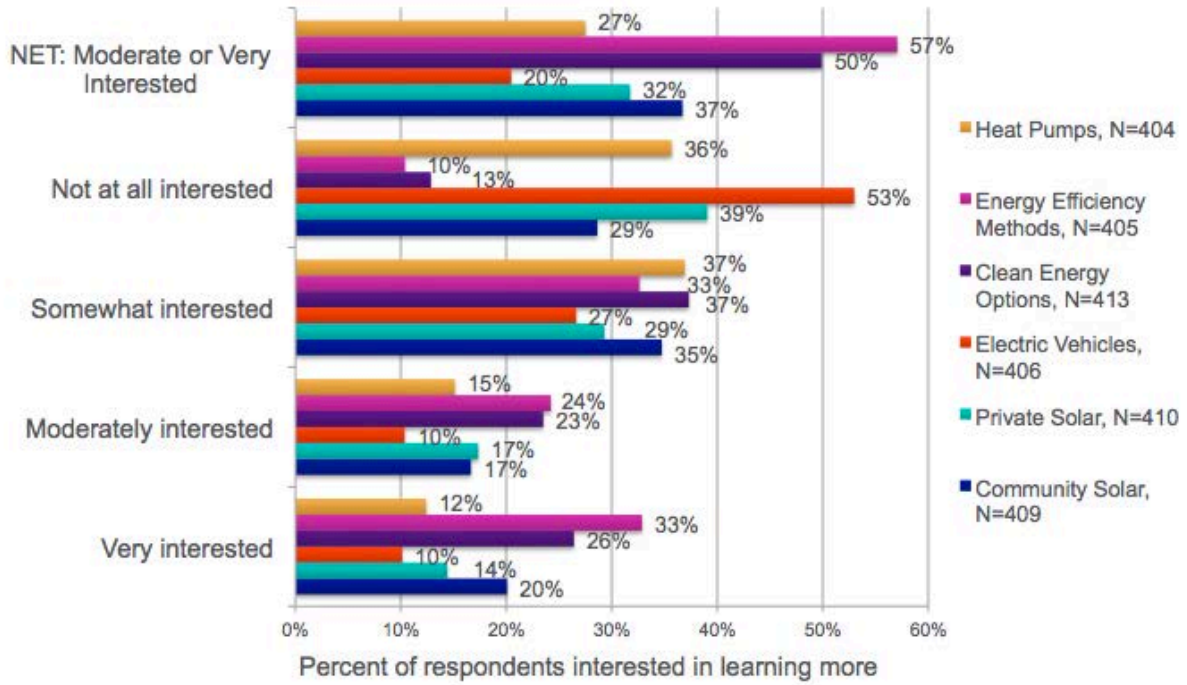


Source: Rhode Island Low and Moderate Income Solar Research, March 2019
 Figure 4: Q5 How interested would you be in learning more about each of the following?; Q6 Thinking specifically about a community solar project, how likely would you be to participate if it were available to you? Base=407

Energy efficiency and other clean energy technologies

When asked interest level in energy savings and clean energy options, most respondents (33%) ranked energy efficiency highest, with clean energy options and community solar ranking 2nd and 3rd, respectively. This indicates potential benefits to coupling a discussion of community solar with energy saving initiatives to provide more robust energy saving opportunities to A-60 customers.

Q: How interested are you in learning more about each of the following?



Selected quotes from respondents

Review of the comments section for the survey showed an interest in learning more about energy savings and clean energy. The below quotes are examples that underline these points and indicate a need to conduct a targeted LMI community solar education campaign.

- “I had no idea renters had a way to utilize solar!!”
- “My concern is pricing for power for elderly/disabled as I do receive a low income electric discount”
- “I would like to be more informed as i pay too much for oil almost \$3000THIS SEASON”
- “As a homeowner, we need to understand and know which clean air programs are the real thing and not just a way to get our money.”
- “Too expensive to consider since we are living on SS.”
- “I love the idea but I have no extra money in my budget so being as cheap or cheaper than my usual bill is VERY important”
- “I think it's a wonderful opportunity climate change is real the only concern I have are funds as my finances are extremely limited”

- “If it's going to raise our monthly rates such as is supposed to happen with wind turbines, then I'd be against it even though It would be good for the environment. Our rates in RI are TOO HIGH!”
- “Please make it available to tenants, with their landlord's OK, and not ONLY home owners.”
- “Would love to learn more, but the random guys going door to door is sketchy”

Conclusion and discussion

The results of the survey indicated that while respondents had little information about community solar, many of them have an interest in learning and potentially participating in community solar and other energy saving initiatives. Respondents are nearly equally as interested in reducing energy costs as contributing to the protection of the environment. This is a key finding that suggests that messaging which includes both the economic benefits and environmental protection can be a powerful frame for the discussion of community solar in LMI communities. Analysis of the overlap between interest in community solar and likelihood to participate across the survey's broad range of categories suggest that highly effective outreach strategies should include a clearly identifiable, state-supported web presence in partnership with community leaders and solar developers and accompanied by outreach materials in English and Spanish. The possibility of an LMI carve-out should be explored further.

Next steps

The OER team will use the survey information to create content for the upcoming community solar marketplace website, refine the existing community solar brochure, and design community outreach programs through train the trainer initiatives throughout the state. The data collected from the survey also provides a useful snapshot of A-60 customers' interest in community solar that can provide a foundation for future LMI community solar carve-out policies.