

New Hampshire Department of Energy



NEW HAMPSHIRE
Low-Moderate Income
Community Solar Projects
Market Status
and
Addition Costs & Benefits Report

July 1, 2022

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EXECUTIVE SUMMARY

In 2019, the General Court passed Senate Bill 165¹ mandating that the Public Utilities Commission (PUC) report on or before July 1, 2022 on the costs and benefits of the adder established within the same bill, the development of the LMI community solar market, and recommend whether the adder should be modified. On July 1, 2021, the New Hampshire Department of Energy (Department) came into existence and many functions previously performed by the PUC were transferred to the Department. Under RSA 362-A:9 and RSA 362-F, as amended effective July 1, 2021, the Department is now responsible for group net metering (GNM) administration, and the administration of the New Hampshire RPS, related Renewable Energy Fund (REF), and all REF programs including the Low-Moderate Income Community Solar Grant Program (LMI Grant Program). The Department therefore is authorized to administer the relevant provisions of the statute, including reporting on the development of the LMI community solar market and LMI Adder on or before July 1, 2022. The report that follows describes the current status of the LMI community solar market, provides a case study of the current eligible LMI Community Solar Project which has registered as an LMI group and is receiving a 2.5 cent per kilowatt-hour adder (LMI Adder), and summarizes public input regarding LMI community solar market barriers and opportunities.

The LMI community solar market has access to multiple programs/incentives in New Hampshire. Senate Bill 129² (SB 129)(2017), established a defined term “LMI Community Solar Project” (362-F:2, X-a.), created a program to benefit low-moderate income residential customers, including LMI Community Solar Projects, and required that no less than 15 percent of the Renewable Energy Fund (REF) be allocated annually to such an LMI program. From this, the PUC, now Department, worked with stakeholders to develop the LMI Grant Program which has received 18 unique grant proposals, 15 of which were deemed to be eligible, since its inception in 2018.

Senate Bill 165³ (SB 165)(2019) enabled eligible LMI Community Solar Projects, as defined in RSA 362-F:2, X-a, to receive a 3 cent per kilowatt-hour adder through June 30, 2021, and 2.5 cent per kilowatt-hour adder (LMI Adder) after that time. The LMI Adder is a per kilowatt-hour amount that effectively increases the net metering tariff compensation (rate) paid for net excess generation and is enabled under the group net metering statute of RSA 362-A:9⁴. Because the LMI Adder is situated within the group net metering statute, it is available to eligible projects within the service territories of the three regulated utilities only. Projects must register as group hosts with on-bill crediting, must meet the definition of LMI Community Solar Project in RSA 362-F:2, X-a, and meet other applicable requirements as outlined in the N.H. Code of Administrative Rules Chapter Puc 900 rules (Puc 900 rules).

¹ See Senate Bill 165 (2019),

http://gencourt.state.nh.us/bill_Status/billText.aspx?sy=2019&id=1054&txtFormat=pdf&v=current.

² SB 129 is known as the New Hampshire Clean Energy Jobs and Opportunity Act and was enacted as 2017 N.H. Laws Chapter 226.

³ SB 165 is known as the Low-Income Community Solar Act and was enacted as 2019 N.H. Laws Chapter 271.

⁴ [Section 362-A:9 Net Energy Metering. \(state.nh.us\)](http://www.state.nh.us/section362-A:9%20Net%20Energy%20Metering)

Senate Bill 270⁵ (SB 270) (2022) recently passed both houses of the legislature and is awaiting review and action by the Governor. This bill establishes a program for up to an aggregate of 6MW per year for low-moderate income electric customers to participate in qualifying LMI community solar projects. This program is specifically for residents who have enrolled in or are on a waitlist, should one be established, for the state Electric Assistance Program. It will enroll qualifying households on an opt-out basis into qualifying projects, which must meet the definition of LMI Community Solar Projects and be eligible to receive the LMI Adder.

A number of different project models have responded successfully to the LMI Grant Program, which has now been in place for five years. The LMI Adder, which has effectively been in place for two years has one currently eligible project. The impact of SB 270 (2022) cannot yet be determined, and the Department will be convening stakeholders to further develop the implementation of this program in coming months.

Results

LMI Community Solar Market Status

The LMI Grant Program, which has been in place for five years, has seen demand in each year it has been offered. Since its start in 2018, it has provided funding for nine projects using a total of about \$1.5 million in REF funding. The LMI Adder, which has been effectively in place for two years, has one registered group. The Department is not aware of any LMI community solar developments in the state that have become operational independent of these public initiatives, which indicates that public funding is currently needed for LMI community solar market development.

LMI Grant Program project models and associated benefits have varied, and all projects have been found to provide net positive benefits with no upfront costs to LMI participants. Further analysis of annual costs, direct benefits, non-monetary benefits, and observations regarding the program, as well as case studies for a number of grant awardees can be found in the June 1, 2020 Low Moderate Income Community Solar Projects Costs and Benefits Legislative Report⁶.

There is currently one group net metering (GNM) project that has applied and been approved as an LMI Community Solar Project eligible to receive the 2.5 cent/kWh addition under RSA 362-A:9 XIV (c)(1) and RSA 362-F:2 X-a. This project was also an LMI Grant Program awardee. Two additional LMI Grant Program awardees have indicated an intention to pursue the LMI Adder.

SB 270 (2022) has recently passed both houses of the legislature and is awaiting review and action by the Governor. It goes into effect 60 days after passage. The statute also states that the Department shall develop a process for developers to apply for designation as LMI Community Solar Projects within 90 days of the effective date of the statute. The Department will, with stakeholder input, develop further procedures for the implementation of this bill, including review of its interaction with group net metering statutory and rule

⁵ https://www.gencourt.state.nh.us/bill_status/legacy/bs2016/billText.aspx?sy=2022&id=2118&txtFormat=html

⁶ [Renewable Portfolio Standard | NH Department of Energy](#)

requirements, under which the LMI Adder is enabled.

LMI Adder Costs, Benefits,

The limited number of current LMI Adder groups prevents analysis regarding the costs and benefits of the LMI Adder, however a case study of the current eligible LMI Adder group provides information regarding the costs, benefits, and experience of that project. The operational LMI Adder project is providing group net metering credit, including the LMI Adder as direct benefit to LMI participants through on-bill credits and lot rent reductions, and the remaining credits stay with the resident owned community (ROC), which owns the system, to cover administrative costs such as taxes and maintenance. The project utilizing the LMI Adder stated that the project would not be possible without grant funding and the LMI Adder.

Public Comment on LMI Community Solar Market Development

All stakeholders report that there is demand for LMI community solar. Stakeholders also report that the upfront work for energy project planning is complicated and time consuming, especially for LMI, community-scale work. Projects can take up to two years from development to operation, sometimes longer if unexpected delays are encountered. The LMI Grant Program has been in place for five years, the LMI Adder program effectively has been in place for two years, and SB 270 (2022) recently passed both houses of the legislature and is awaiting review and action by the Governor. Recognizing the long lead times required for community scale energy projects, and additional complexity of LMI projects, it could be beneficial to review programs in 2025, five years from the finalization of rules related to the LMI Adder, and again in 2027, five years from the passage of SB 270.

Observations

The Department sought and received input regarding the LMI community solar market and the LMI Adder in preparation for this report. The following observations come from that process:

- Community-scale energy project planning involves the coordination of many actors, and such projects can often take multiple years to develop even without bringing in the LMI component. Many stakeholders reported demand is there for these kinds of projects, and they are only limited by the limited organization bandwidth available to develop projects. Programs that reflect this reality may increase effectiveness and efficiency.
- There is demand for these programs. Stakeholders all reported interest in projects, and cited time and resources for project development as a limiting factor on project development, not demand.
- Different program models address different populations and issues within those groups; for example project goals could address some of the following to differing degrees: reducing disproportionate energy burdens for many individuals, making renewable benefits more equitably accessible, increasing energy choice and control for LMI community members, providing bill predictability and simplification.
 - There is space and roles for different program and project models.

- It is important to understand that goals may vary by project type to and to consider goals in program evaluation.
- Stakeholders all agreed that seed funding for developing projects could significantly reduce the barriers to participation in the RFP program and likely also allow deeper investigation into the LMI Adder incentive. Small, planning stage grants could result in more, and better, applications for both incentives. Such funding also contributes to the development of area expertise in community organizations interested in pursuing this underserved market and potentially in the LMI community itself.
- Financing is and appears to continue to be an issue with LMI market development, it may be beneficial to explore ways to develop more effective, sustainable, financing models.
- For small community organizations developing LMI projects, any complications or issues that create delays, have the potential effect of preventing the next round of projects from development or prevent inception of additional projects.
- There is a lack of awareness of the LMI Adder in the LMI support organization community and a need for outreach and education.
- Acquisition of moderate-income participants has proven challenging for projects, yet multiple grant recipient ROC projects have managed to include moderate-income families.

BACKGROUND

Establishment of the New Hampshire Department of Energy

In 2019, the General Court passed Senate Bill 165⁷ mandating that the Public Utilities Commission (PUC) report on or before July 1, 2022 on the costs and benefits of the adder established within the same bill, the development of the LMI community solar market, and recommend whether the adder should be modified.

On July 1, 2021, the New Hampshire Department of Energy (Department) came into existence and many functions previously performed by the New Hampshire Public Utilities Commission (PUC) were transferred to the Department. Under RSA 12-P:14, “[e]xisting rules, orders, and approvals of the [PUC] which are associated with any functions, powers, and duties, transferred to the [Department] pursuant to RSA 12-P:11 or any other statutory provision, shall continue in effect and be enforced by the commissioner of the [Department] until they expire or are repealed or amended in accordance with applicable law.” See 2021 N.H. Laws Chapter 91 (House Bill 2-FN-A-Local).

Under RSA 362-A:9, as amended effective July 1, 2021, the Department is now responsible for group net metering (GNM) administration and for the adoption of related rules. Under RSA 362-F, the Department is now also responsible for the administration of the New Hampshire Renewable Portfolio Standard (RPS), related Renewable Energy Fund (REF), and all REF programs, including the Low-Moderate Income Community Solar Grant Program (LMI Grant Program). The Department therefore is authorized to administer the relevant provisions of the statute, including reporting on the development of the LMI community solar market and the LMI Adder, on or before July 1, 2022.

Low-Moderate Income Community Solar Legislation

Senate Bill 129, 2017

With the passage of Senate Bill 129⁸ (SB 129) in 2017, the General Court found it to be “in the public interest to promote customer choice and energy independence by eliminating market barriers to solar energy that low-to-moderate income residential customers face, by sustaining and promoting local renewable energy resources.” Among other things, SB 129:

- ❖ Required the PUC to develop a program to “benefit low-moderate income residential customers, including, but not limited to, the financing or leveraging of financing for low-moderate income community solar projects in manufactured housing communities or in multi-family rental housing.” See RSA 362-F:10, X.⁹

⁷ See Senate Bill 165 (2019), http://gencourt.state.nh.us/bill_Status/billText.aspx?sy=2019&id=1054&txtFormat=pdf&v=current.

⁸ SB 129 is known as the New Hampshire Clean Energy Jobs and Opportunity Act and was enacted as 2017 N.H. Laws Chapter 226.

⁹ [Chapter 362-F ELECTRIC RENEWABLE PORTFOLIO STANDARD \(state.nh.us\)](http://gencourt.state.nh.us/legislation/chapter.aspx?chapter=362-F)

- ❖ Provided the program with the ability to “finance or leverage financing” for LMI Community Solar Projects in manufactured housing communities or in multifamily rental housing.
- ❖ Mandated that the PUC (now the Department) allocate no less than 15 percent of the REF annually to an LMI program.
- ❖ Required that the PUC issue a report on the costs and benefits of LMI community solar projects on or before June 1, 2020.¹⁰
- ❖ Established a defined term “LMI Community Solar Project” (362-F:2, X-a.) as “ground-mounted or rooftop solar arrays that directly benefit a group of at least 5 residential end-user customers, where at least a majority of the residential end-user customers are at or below 300 percent of the federal poverty guidelines.”

Senate Bill 165, 2019

In 2019, the General Court passed, and the Governor signed into law, Senate Bill 165 (SB 165)¹¹. Among other things, SB 165:

- ❖ Amended the definition of “low-moderate income community solar project” to include a requirement that no more than 15 percent of the projected group load may be attributable to non-residential customers.
- ❖ Amended RSA 362-A:9¹² to provide group hosts and members with the ability to elect to receive on-bill credits rather than the host receiving compensation by check for net excess generation at the end of each billing cycle.
- ❖ Allowed eligible LMI Community Solar Projects to receive a 3 cent per kilowatt-hour adder through June 30, 2021 and 2.5 cent per kilowatt-hour adder (the LMI Adder) after that time. The LMI Adder is a per kilowatt-hour amount that effectively increases the net metering tariff compensation rate credited to a group host and its group members for net excess generation.
- ❖ Mandated that the PUC report on the costs and benefits of the LMI Adder and the development of the LMI community solar project market and recommend whether the Adder should be modified, on or before July 1, 2022.
- ❖ Required that the PUC authorize at least two new LMI community solar projects per year in each utility’s service area, starting on January 1, 2020.

Because SB 165 and the LMI Adder are included in the group net metering statute, the LMI Adder is available to eligible projects only within the service territories of the three regulated utilities.

¹⁰ Report originally due no later than December 31, 2019. Due date was amended by SB 165 (2019) to June 1, 2020.

¹¹ SB 165 is known as the Low-Income Community Solar Act and was enacted as 2019 N.H. Laws Chapter 271.

¹² [Section 362-A:9 Net Energy Metering. \(state.nh.us\)](https://www.state.nh.us/leg/section362-A:9-Net-Energy-Metering.html)

Senate Bill 270, 2022

Senate Bill 270¹³ (SB 270) (2022) recently passed both houses of the legislature and is awaiting review and action by the Governor. Among other things, this bill:

- ❖ Establishes a program for certain LMI electric customers to participate in selected qualifying community solar projects.
- ❖ Requires electric distribution utilities to establish a list of LMI residential customers who qualify for project participation, specifically consisting of residents who have enrolled in or are on the waitlist for the state Electric Assistance Program (EAP).
- ❖ Allows for up to 6 MW per year to be selected for projects through a process to be developed by the Department.
- ❖ Will enroll qualifying households on an opt-out basis into selected qualifying projects, which must meet the definition of LMI Community Solar Projects and be eligible to receive the LMI Adder.

The bill also clarifies that it does not preclude other LMI community solar projects from enrolling customers in other ways. While the specific implementation of this bill, and how it would interact with group net metering statutory requirements, has yet to be developed, it has the potential to reduce multiple costs and barriers cited by potential project developers, including those related to income verification and customer acquisition and management.

Low-Moderate Income Community Solar Grant Program Development

After SB 129 was enacted, the PUC initiated an extensive stakeholder process and then issued Order No. 26,113,¹⁴ which approved issuance of a Request for Proposals (RFP) for grant funding as an appropriate means of meeting the statutory requirements of SB 129 for the current fiscal year. The PUC stated that the RFP approach should allow for the review and evaluation of multiple project models to allow for possible future development of a non-RFP LMI Program. The first RFP for the Renewable Energy Fund Low and Moderate Income Community Solar Program (LMI Grant Program) was issued in March 2018. The RFP sought “Community Solar Photovoltaic Projects Providing Direct Benefits to Low and Moderate Income Residential Electric Customers.”

In subsequent years, after receiving further stakeholder input, the PUC continued to approve utilization of competitive solicitations to select LMI solar projects for grant funding in FY 2019 and FY 2020 through Order No. 26,214, and through Order No. 26,444 for FY 2021. Following the transfer of REF management authority to the Department, and after receiving additional stakeholder support, a competitive solicitation for LMI solar projects to receive grant funding was conducted through the issuance of an RFP was also approved for 2022.

¹³ https://www.gencourt.state.nh.us/bill_status/legacy/bs2016/billText.aspx?sy=2022&id=2118&txtFormat=html.

¹⁴ See <https://www.puc.nh.gov/Regulatory/Orders/2018orders/26113e.pdf>, Order No. 26,113, Docket DE 17-172.

Low-Moderate Income Community Solar Adder (LMI Adder) Statute Implementation

After SB 165 was enacted in 2019, the PUC initiated a rulemaking process in DRM 19-158,¹⁵ in order to update the N.H. Code of Administrative Rules Chapter Puc 900 rules (Puc 900 rules) that govern net metering and group net metering. Within that rulemaking process, additional requirements and process details related to the implementation of SB 165 were developed with the input of a diverse group of interested stakeholders. The rulemaking began in September 2019 and involved multiple stakeholder sessions, opportunities for written comment, and a public hearing. Final updated rules were adopted in July 2020 and remain in effect. Some of the processes and requirements related to the LMI Adder addressed through that rulemaking include:

- Minimum on-bill credit requirements for LMI Adder group members
- Method and timing of reporting and implementing group changes for on-bill credit groups
- Annual reporting requirements for LMI Adder groups
- Member-to-host data sharing for all on-bill credit groups
- LMI Adder eligibility for individual group members and for affordable housing projects
- Protections regarding power purchase agreements and other charges for individual LMI Adder group members
- Guidance regarding direct benefits to be provided by participating affordable housing projects
- Income verification procedures for eligible LMI Adder projects

Report Development

SB 165 (2019) mandated that the PUC (now the Department) “report on the costs and benefits of the [LMI Adder], the development of the [LMI community solar market], and recommend whether the adder should be modified on or before July 1, 2022.” In the preparation of this report, the Department created a public webpage and solicited public comment related to the topics outlined in the statutory mandate,¹⁶ reviewed annual reports from LMI Grant Program awardees as well as LMI Adder eligible group hosts, and conducted informal interviews with LMI stakeholders, including past and current program participants, developers, and electric utilities.

This report covers the current status of the broad LMI community solar market, including LMI Community Solar Projects as defined in RSA 362-F:2, X-a, by reviewing participation in the LMI Grant Program, which has been in place for five years, as well as the LMI Adder, for which rules have been in place for two years. The report provides observations regarding the costs and benefits of LMI Adder project group development and participation through a case study of the one currently eligible LMI Adder group. It also provides feedback and recommendations based on public input received regarding LMI solar market barriers and potential opportunities for improved market development.

¹⁵ DRM 19-158; Rulemaking, New Hampshire Code of Administrative Rules Chapter Puc 900 Net Metering for Customer-Owned Renewable Energy Generation Resources of 1,000 Kilowatts or Less available at: <https://www.puc.nh.gov/Regulatory/Docketbk/2019/19-158.html>

¹⁶ [Legislative Report on Costs and Benefits of LMI Adder | NH Department of Energy](#)

LMI COMMUNITY SOLAR MARKET STATUS

Program availability for LMI Community Solar Projects and the LMI Community Solar Market

LMI Adder Eligibility and LMI Community Solar Competitive Grant Program Eligibility

The LMI Grant Program began issuing RFPs in 2018, while the rules governing the LMI Adder were finalized in 2020. Per RSA 362 F:10 X, the funding allocated for the LMI Grant Program must “benefit low-moderate income residential customers, including, but not limited to, the financing or leveraging of financing for low-moderate income community solar projects in manufactured housing communities or in multi-family rental housing”. Therefore, the LMI Grant Program is open to all projects directly benefiting LMI residential customers, which may include LMI Community Solar Projects as defined in 362-F:2, X-a, or other project models that benefit LMI residential customers.

The LMI Adder, alternatively, is available to projects which register as group hosts and demonstrate they meet the definition of “LMI Community Solar Project” as defined in 362-F:2, X-a. Such groups need to meet the requirements for group registration laid out in RSA 362-A:9, XIV, and further developed in the Puc 900 rules, as well as the LMI Community Solar Project definition (362-F:2, X-a) and accompanying requirements as outlined in Puc 900 rules.

In describing the market status for LMI community solar market, we review projects that have accessed both programs. Although not all projects that receive grant funding meet the legislative definition of an LMI Community Solar Project, these projects do benefit LMI residential customers, and therefore represent part of the larger market of LMI customers accessing the benefits of renewable energy. Many grantees, however, may meet the definition of LMI Community Solar Project, and some projects are eligible to access both incentive programs. The current LMI Adder group host, for example, is also a grantee of the LMI Grant Program.

The LMI Grant Program is available for projects in all service territories. The LMI Adder, enabled through RSA 362-A:9, the net metering and group net metering statute, is available in the territories of the three regulated utilities and not available in the New Hampshire Electric Cooperative service territory. Additionally, as outlined in more detail below, non-utility paying residents are not residential end-user customers, as defined in RSA 362-F:2, XI, and therefore may not be counted as LMI residential end-user customers for the purposes of either program.

Implementation of SB 270 (2022): Act establishing a low-moderate income community solar program

SB 270 (2022) which has recently passed both houses of the legislature and is awaiting review and action by the Governor, would go into effect 60 days after passage. The proposed statute states that the Department shall develop a process for developers to apply for designation as community solar projects within 90 days of the

effective date. If SB 270 becomes law, the Department will, with stakeholder input, develop further procedure for the implementation of this bill, including review of its interaction with group net metering statutory and rule requirements, under which the LMI Adder is enabled. The Department expects similar issues as were addressed in development of the two current LMI incentives to be covered in further program development, including program application processes, benefit guidance and metrics, LMI customer protection measures, data access, reporting requirements and processes, group management and administration processes. To the extent established rules or policies regarding these topics exist under current group net metering rules and statutes, those will be reviewed for compliance with SB 270, should it become law.

Current LMI Adder Group Host(s)

There is currently one group net metering (GNM) project that has applied and been approved as an LMI Community Solar Project eligible to receive the 2.5 cent/kWh addition under RSA 362-A:9 XIV (c)(1) and RSA 362-F:2 X-a (LMI Adder group). This project was also an LMI Grant Program awardee. Department staff are not aware of additional projects planning to apply as LMI Adder groups beyond the grant recipient projects listed below. Unless a project is involved with the Department through the LMI Grant Program or reaches out with inquiries during the project planning or development stage, awareness of LMI Adder projects in progress is limited.

The White Rock Cooperative Estates, Inc. (White Rock), project was approved to receive grant funding through the LMI Grant Program in May of 2019. With the grant funding, White Rock’s resident-owned community (ROC) was able to purchase the array and owns the community solar project outright. As an LMI Adder group host in New Hampshire’s group net metering program, White Rock receives payments from the utility for the array’s generation with the inclusion of the 2.5 cent/kWh LMI Adder. White Rock provides direct benefits to its participating residents in the form of on-bill credits and lot rent reductions using the income received from generation. White Rock receives *Pro bono* legal services and technical support, including income verification, from Vermont Law School Energy Clinic (VLS).

The solar array was installed on land owned by the ROC and located within the White Rock community. The array consists of 240 panels and has a total capacity of 66.6 kW AC. The system became operational in fall of 2020 and generated 104,231 kWh in 2021. The project allocates 25% of the project’s net metering payments for generation to participants as on-bill credits and the remaining 75% of net metering payments, after administrative costs, is distributed to participants as lot rent reduction.

Low-Moderate Income Community Solar Competitive Grant Program

RSA 362-F:10, X, requires allocating “no less than 15 percent of the Renewable Energy Fund annually to program(s) that benefit low-moderate income residential customers, including, but not limited to, the financing or leveraging of financing for low-moderate income community solar projects in manufactured housing communities or in multifamily rental housing.” Based on periodic stakeholder input as well as the continuous

approval of the PUC and the Department, the LMI Program has, since its inception in 2018, issued a competitive solicitation annually for community solar PV projects providing direct benefits to LMI residential electric customers. Since 2018, this program has made \$2,705,000 in funding available to potential LMI Community Solar Projects as defined in 362-F:2, X-a and the broader LMI solar project community. To this point, the Department largely relies on LMI community solar grants awarded for insight into the development of the LMI community solar market.

Table 1. LMI Grant Program Funding 2018-2022

Fiscal Year	Total available funding	Total Eligible Applicants	Total Awardees	Total Funding Awarded	# Participants	Pursuing or Current LMI Adder Participant
2018	\$405,000	5	3	\$404,721	67	NA
2019	\$650,000	4	3	\$500,000	40	1
2020	\$900,000	5*	1	\$253,827	23	0
2021	\$400,000	5	2	\$379,744	47	2
2022	\$350,000	0	0	0	0	0

*2020 includes four proposals submitted prior to RFP cancellation due to DAS/statutory review.

In 2018, the initial year of the LMI Grant Program, three projects were selected, and contracts were approved by the Governor & Executive Council. All three projects have been constructed and became operational prior to the passage of SB 165 which enabled the LMI Adder.

In 2019, three projects were selected for funding. One awarded project decided not to move forward with the project after unsuccessfully attempting to negotiate a payment in lieu of taxes with the town in which they are located, and the community board being unable to garner support for the project from of the majority of residents. Both remaining selected projects became operational in 2020, one of which is the subject of this report, White Rock.

Two RFPs were issued under the LMI Grant Program in fiscal year 2020. The proposal selected through the first iteration of the fiscal year 2020 RFP process recently received Governor & Council approval for a contract extension. This project intends to take advantage of the LMI Adder when operational. An additional RFP was issued to fully expend the remaining fiscal year 2020 funding, and received four proposals, but was subsequently cancelled while the Department of Administrative Services undertook a complete review of the REF account regarding statutory language changes and the continual appropriation of funds. Three of the proposals were re-submitted for the next iteration of the RFP, one of which was deemed ineligible.

In response to the RFP issued in fiscal year 2021, five applications were received, and two projects were selected for funding. The two proposals selected through the 2021 RFP process intend to utilize the LMI Adder. Both

projects are still under construction.

In fiscal year 2022, following the creation of the Department, two RFPs were issued and each received one submission, however neither submission was eligible and therefore no grants were awarded in 2022. The Department sought and has received feedback from stakeholders related to the grantmaking cycle that is included in the PUBLIC COMMENTS ON PROGRAM AND MARKET DEVELOPMENT¹⁷ section of this report.

Projects awarded grants under this RFP have represented various models, including:

- Resident-owned community solar PV utilizing a power purchase agreement with benefits provided as lot rent reductions,
- Rooftop solar on income restricted multifamily rental housing with benefits provided as electric bill elimination,
- A subscription-based model with benefits provided as on-bill credits,
- Resident-owned community solar owned by the community with benefits provided as lot rent reductions and on-bill credits, and
- Non-profit owned community solar with benefits provided as on-bill credits

Through follow up reporting from grant recipients, the Department has gained insight into the implementation and effectiveness of each model, as well as feedback regarding the LMI Grant Program. Given the unique characteristics of each model, the analysis, and specific costs and benefits data vary by project. Further analysis of annual costs, direct benefits, non-monetary benefits, and observations regarding the program, as well as case studies for a number of grant awardees can be found in the June 1, 2020 Low Moderate Income Community Solar Projects Costs and Benefits Legislative Report¹⁸. An overview of the LMI Grant Program for each fiscal year is available in the Renewable Energy Fund Annual Reports available online.¹⁹

¹⁷ See PUBLIC COMMENTS ON PROGRAM AND MARKET DEVELOPMENT, page 22

¹⁸ [Renewable Portfolio Standard | NH Department of Energy](#)

¹⁹ [Renewable Energy Fund | NH Department of Energy](#)

LMI ADDER COSTS AND BENEFITS

Rules governing the LMI Adder were finalized in July of 2020²⁰, and, as of the drafting of this report, there is one group net metering host that is eligible to receive the LMI Adder, White Rock Cooperative Estates, Inc. Given stakeholder feedback regarding the time and resources required for LMI project development specifically, it is not unexpected that few projects have become operational, applied, and received registration as LMI Adder group hosts as of two years following the finalization of rules for this incentive. Some stakeholders reported project development for LMI taking 1.5-2 years, so this lack of applications may be related to the lengthy planning timeline natural to community scale LMI energy projects. However, the Department has also pursued and provided feedback in this report from stakeholders regarding barriers to participation and opportunities to increase market development.

Due to the lack of currently eligible projects, information available for analysis regarding the costs and benefits of the LMI Adder is limited. Below we provide a case study of the current eligible LMI Community Solar Project group eligible for the LMI Adder which reviews reported costs and benefits but note that this review can speak only to one project design model, and suggest that review of additional eligible projects in the future could provide additional insight into the costs and benefits of this incentive.

White Rock Cooperative LMI Adder Project Case Study

The White Rock Cooperative Estates, Inc. (White Rock), project model is structured to provide direct benefits to LMI and non-LMI residents of resident-owned communities (ROC). ROCs are neighborhoods of manufactured homes, based on a cooperative ownership structure, where every household in the community participates in the ownership of the underlying property. The ROC community was involved in the process and ultimately voted to move forward with the installation of the array. Through selection of White Rock's proposal submitted to the REF funded LMI Grant Program, White Rock's ROC community was able to purchase the array and owns the community solar project outright allowing for maximum direct benefits of compensation for energy produced to ROC residents by providing community ownership of a ground-mounted solar system.

Vermont Law School Energy Clinic (VLS) designed and implemented this ROC model, with additional support and guidance from ROC-NH™ and a law firm. VLS became involved in the project when approached by ROC USA with the request to develop a project resource manual for future potential ROC participants. *Pro bono* legal services and technical support were also provided to the manufactured housing community.

While it is beneficial for the ROCs to receive the assistance from VLS, the long-term goal is for VLS to hand over the above tasks to the ROC eventually, the over-arching goal being to set up the community to be self-sufficient and manage the documents themselves in conjunction with ROC NH. The Clinic's intention is to create a step-by-

²⁰ [PUC900.pdf \(nh.gov\)](#)

step project resource manual for the entire process that could be passed along through ROC NH or ROC USA to any community interested in pursuing the installation of a solar array for the benefit of the community.

Under New Hampshire's group net metering program, White Rock is the "host" and receives monthly payments from the utility for the array's generation at a rate that is higher per kWh than the net metering tariff with the inclusion of the adder. White Rock in turn provides direct benefits to its participating residents in the form of on-bill credits and lot rent reductions from the income received from generation. It was necessary to include a minimum amount of on-bill crediting in order to qualify the project as a LMI project to receive the LMI Adder. By reducing lot rent and providing on-bill credits, the LMI residents reduce their monthly expenses and avoid any unintended consequences to any other public benefits received.

Income verification is conducted by White Rock working with the VLS Energy Clinic, ROC-NH and the New Hampshire Community Loan Fund to administer income surveys. Participants fill out the anonymous income surveys and return them directly to ROC-NH who shares the results with the Energy Clinic for reporting purposes. The 20 households participating in the community solar project during 2021 includes households that are low-income and households that are moderate-income, and residents may participate regardless of LMI income eligibility. The ROC community feels that it is important for all participants to receive equal benefits to maintain anonymity relating to income levels. Four new members joined the project in 2022.

On May 15, 2019, this project received the approval of the Governor and Executive Council and White Rock received a \$200,000 grant from the LMI Grant Program towards the ownership of the LMI solar project. This community solar project was installed on land owned by the ROC and located within the White Rock community. The array consists of 240 panels and has a total capacity of 66.6 kW AC. The system became operational in fall of 2020 and generated 104,231 kWh in 2021. Accrued savings will be put towards possible property tax expenses.

Case Study Costs

Group Host Costs

With this LMI community solar model the resident-owned community (White Rock) incurred costs. The cost of the installed array was \$223,000. Insurance costs \$959 annually, and White Rock anticipates receiving a property tax bill of approximately \$2,500 annually, though at the time of the release of this report, had not yet received a property tax bill. The payment for insurance was made from the monthly net metering credits paid by compensation for generation. This is the same method of payment that will be incorporated when a tax bill is received. None of the community residents were required to make any payments for participating in the program.

Additionally, there were no administration or accounting costs associated with the project because VLS continued to provide *pro bono* legal and technical support. Pro bono services from start of project include:

- Soliciting RFPs from solar installers, evaluating responses, meeting with White Rock Board and White Rock community members to discuss proposals and make a recommendation.

- Drafting and submitting RFP response to NH PUC.
- Negotiating and drafting engineering, procurement, and construction agreement with solar installer; meeting with White Rock Board to explain terms of the agreement; resolving cost over-runs with solar installer; communicating with NH PUC about cost over-runs.
- Drafting group net metering agreement between White Rock Board and White Rock Community members, meeting with White Rock community members to explain the terms of the group net metering agreement. Drafting amendment to group net metering agreement to allow for partial on-bill crediting to take advantage of LMI Adder, meeting with White Rock community to explain the amendment.
- Preparing municipal permit applications and attending Planning Board meetings.
- Assisting with administering annual income surveys.
- Preparing host registration documentation and annual group net metering reports and grant reporting.

Pro bono services are provided by a staff attorney working with 2-5 law and policy students each semester as part of an experiential learning opportunity at the Vermont Law School Energy Clinic. A conservative estimate of services provided by the staff attorney between 2019 and today is approximately 150 hours.

In addition, because the grantee owns the project, they will need to set aside a portion of the net metering payments to save for the inverter replacement over time. The grantee estimates that the inverter replacement cost will be \$9,000 over 20 years and the grantee should retain \$450 per year to cover this future expense. The White Rock community is currently considering whether they wish to contract with an Operations and Maintenance provider going forward. After any necessary payments are made, White Rock will distribute the remaining balance as on-bill credits and reductions in lot rent equally among participating members.

As mentioned above, because this project was awarded a competitive grant, there is no annual cost related to payment for the initial cost of the solar installation.

Adder Cost and Non-host Program Administration Costs

This project began production as an LMI Adder group in December of 2021, and therefore the addition of 2.5 cent/kWh was only applied to the facility's net excess generation in December; a total of 5,256 kWh and total value of about \$131. The facility did report net excess generation exported to the grid for all of 2021; which was 104,231 kWh. If we assume net excess generation of roughly 100,000kWh/year, the Adder value is \$2,500/year. The impact to ratepayers at this level of cost is de minimus; however, should the total aggregate kWh receiving LMI Adder benefit become significant, the cost impact could be reviewed through a rate and bill impact analysis.

In addition, while LMI Adder group project models do not necessarily require a commercial meter, it appears most LMI Grant Program recipients, and potential LMI Adder projects, involve generation facilities behind a commercial meter, which therefore receive compensation at a lower commercial rate. Were policy enacted to change the compensation rate to residential tariff levels, the increased cost of that additional compensation may also need to be considered.

No utilities provided cost figures related to the cost of program administration for this report; though utilities

have been working with the Department on program implementation within wider GNM and on-bill credit program implementation efforts. Program administration challenges are outlined in the public comments section below, and, though there is only one LMI Adder project online now, as more of these complex groups come online, it may be beneficial to monitor administrative costs associated with program management for both the Department and utilities. Costs associated with regulatory oversight, customer/public support, and group billing management, should be monitored as the program grows.

To the Department's knowledge, group net metering program administration costs, or further breakdown of LMI Adder group administration costs, are not currently specifically tracked in utility cost recovery and it will be important for appropriate tracking of such costs moving forward in order to understand the impact of these programs. SB 270 (2022), which recently passed both houses of the legislature and is awaiting review and action by the Governor, would specifically allow utilities to recover all reasonably incurred costs for implementing the enabled program, including costs of implementation, billing, and administrative activities, tracking of such costs will be additionally important. The Department was additionally unable to identify separate tracking of the cost of the 2.5 cent/ kWh addition and would recommend that this data be provided for review as part of LMI program regulatory reporting.

Annual Benefits

Annual Direct Benefits

In 2021, overall project generation netted \$8,170.16 in net metering generation payments from the utility for 104,231 kWh of generation; an average of \$.084/kWh total credits. This largely reflects the base commercial tariff rate because the LMI Adder was only applied in December of 2021 due to delays in registration. After subtracting the cost of insurance, \$959, the net revenue to White Rock was \$7,211. Rules developed and agreed upon by stakeholders during the Puc 900 rules development process, require that a minimum of 12% of the total net metering credits per year be applied directly via on-bill credits to LMI end-user customers or qualified Affordable Housing Properties (AHPs). 77% of the White Rock group participants are LMI, and White Rock as the host is considered a qualifying AHP. Participants in the White Rock project receive direct benefits in two ways. 25% of the Project's total net metering payments for the project's kWh generation from Eversource are delivered as on-bill credits divided equally among all participants. The remaining 75% of the total net metering payments for the project's generation will be allocated to White Rock who will distribute the balance, after paying for project costs, as monthly lot rent reductions to each of the project participants.

It took one year from the start of system operation for the project to be registered with the utility as an LMI Adder Group Host. As a result, on-bill crediting and inclusion of the 2.5 cent/ kWh Adder in total credits to the group began in December 2021. Each of the group members received a credit of \$6.94 on their electric bill for December. White Rock calculates that the compensation received for 2022 generation for the adder only will be approximately \$2,600 and will help to offset the cost of the anticipated property tax bill increases going forward.

After paying project expenses, participants will begin receiving lot rent reduction benefits beginning in 2022, rather than upon receipt of payment from the utility, to ensure funding is available to enable equal, and

consistent, monthly lot rent reductions. Each of the 24 participants will receive a monthly lot rent reduction in the amount of approximately \$14 monthly. This is a total of \$4,032 year in lot rent reduction benefit. If similar production and commercial compensation rates are assumed for 2022, total credits expected with the inclusion of the LMI Adder would be an average of .109/kWh, totaling about \$11,000 for the year. As reported above, 25% of that, or about \$2,800 will be applied directly to participant bills.

Between lot rent reductions and on-bill credits, this results in roughly \$6,800 or 61%, in direct benefits to participants. The remaining benefit is also staying within the LMI community-owned ROC organization as a qualifying AHP and will be used to administer the project. This represents 100% of the benefit staying within the qualified LMI community, which is well over the 12% minimum requirement agreed upon with stakeholders during the Puc 900 rulemaking process.

The direct ownership model, as well as LMI Grant Program Funding, enable essentially all of the benefit of this project to go directly to the LMI community and LMI residents. Other project models, should they come online and be reviewed, may leverage different financing structures impacting the number of LMI participants reached as well as total benefits to LMI residents.

The solar system was certified as eligible to generate New Hampshire Class II RECs. The solar array produced 104 Class II RECs in 2021. The system owner, in this case the ROC, has the option to sell the RECs in the regional compliance market creating additional monetary benefit.

Non-monetary Benefits

Community, or shared solar programs, such as the resident-owned community model, can enable multiple electric customers to receive benefit from a single solar system through the sharing of the electricity generated by that shared system. The location of the array within the community provides residents with a physical connection to the solar array that is providing them with lot rent reduction benefits, as well as on-bill credits.

While it is beneficial for the ROCs to receive the assistance from VLS, the long-term goal is for VLS to hand over the above tasks to the ROC eventually, the over-arching goal being to set up the community to be self-sufficient and manage the documents themselves in conjunction with ROC NH. The Clinic's intention is to create a step-by-step guidance manual for the entire process that could be passed along through ROC NH or ROC USA to any community interested in pursuing the installation of a solar array for the benefit of the community. VLS intends to provide energy efficiency training and information in the future for White Rock residents during the annual community meeting further promoting energy savings and renewable energy which VLS was unable to provide during 2021 due to the pandemic.

This resource-building portion of the project creates an important non-monetary benefit that moves beyond reducing energy burden and in addition creates opportunities for engagement through intentional effort to create tools and ability for communities to exercise energy choice and control as afforded to communities with capital and other resources.

The direct ownership model, supported by LMI Grant Program funding, also enables much of the benefit to stay within the LMI community, this maximizes the long-term benefit and value captured by the community as

opposed to third-party investment models which often rely on some portion of that value going to outside investor groups. This model removes the economic barriers inhibiting LMI adoption of renewable energy through ownership made possible through REF grant, because the ROC did not have to raise capital to develop the project. White Rock also continues to receive *pro bono* legal services and assistance to administer the program.

Finally, LMI community solar projects in New Hampshire have relied on partnerships between hosts, developers, members and other groups to achieve completion. Community engagement and community building is another non-monetary benefit of such projects.

Observations

The following additional observations were highlighted by VLS staff regarding the LMI Adder project:

- It was necessary to include an amount of on-bill crediting in order to qualify the project as a LMI project to receive the LMI Adder. The Project originally proposed to distribute direct benefits to participants by way of lot rent reductions only. However, on-bill credits were incorporated to take advantage of the new LMI Adder authorized by SB 165 (2019).
- The monthly lot rent reduction will be calculated annually based on the expected annual kWh production and the applicable net metering rate for the year to provide participants with a stable monthly benefit throughout the year. There will be an annual “true-up” to re-balance any prediction error. All participants, whether LMI or non-LMI, will receive the same benefit.
- The Project encountered delays in group net metering registration therefore did not receive the LMI Adder during this period prior to registration, which means that the Project participants will receive less net-direct benefits for the 2021 generation than anticipated.
- The adder helps to bring closer to parity with the residential rate. VLS suggests it would be appropriate and beneficial for these projects to be compensated at the residential rate instead of the commercial rate.
- By fully funding the development of one resident-owned community project through the Renewable Energy Fund, the model is simplified and residents realize greater benefits and connection to the benefit source beginning day one of operation.
- Upfront work for project planning is complicated and time consuming. Projects can take up to two years from development to operation, sometimes longer if unexpected delays are encountered. More detail regarding project development is provided in the public comments section of the report below.
- There is demand for projects from the ROC community, but limited resources in VLS to meet that demand, with one person and students dedicating time to these ROC projects, which may lead to

cyclical responses to available funding opportunities.

- Projects would not happen without the grant and the adder. If more funding was available for support organizations, they could address the challenge of time and resources available for technical assistance.
- Turnover within the community caused administrative issues with GNM application approval. Some of the natural turnover issues that can occur within the community such as sale of the home, clerical issues or name changes within households, and death of an accountholder were a few of the occurrences that led to the delay of the approval of the GNM application.

SB 270 (2022) Act establishing a low-moderate income community solar program

SB 270 (2022) recently passed both houses of the legislature and is awaiting review and action by the Governor, the costs and benefits of SB 270 (2022) may be further evaluated in future state LMI program reviews.

This program has the potential to reduce multiple costs cited by developers as continued challenges to economic viability of the LMI community solar market. These include income verification costs, customer acquisition costs, and group management costs. By requiring utilities to provide EAP customer lists to selected qualifying projects, establishing an “opt-out” auto-enrollment, and mandating that eligibility be attached to EAP eligibility, this reduces the need to locate, market to, and acquire LMI customers; as well as potentially reducing ongoing administration costs related to GNM group management.

This program design may enable larger projects with easy access for LMI customers in, or on an EAP waiting list (in the event that one is created), further reducing energy burdens for a potentially significant portion of this group. To what extent customer costs will be reduced, and for how many LMI residents remains to be seen and could be periodically reviewed.

Potential benefits of this project designs enabled by this statute include reduced costs attracting large-scale development and accompanying economies of scale, reaching many LMI customers quickly and efficiently. The extent to which the project models enabled here create LMI community, or support organization, capacity-building or energy sovereignty remains to be seen. Additionally, stakeholders have suggested that the involvement of third-party financing, as is common with large scale projects, may reduce the amount of benefit/wealth creation that stays in the community as compared to other project designs focused on community engagement and ownership.

Additionally, regarding costs, this bill specifically allows utilities to recover all reasonably incurred costs for implementing this program, including costs of implementation, billing, and administrative activities. To the Department’s knowledge, group net metering program administration costs, or a further breakdown of LMI Adder group administration costs, are not currently tracked in utility cost recovery and it will be important for appropriate tracking of such costs moving forward in order to understand the impact of these programs.

PUBLIC COMMENTS ON PROGRAM AND MARKET DEVELOPMENT

There is not currently sufficient data regarding the costs and benefits of the LMI Adder policy and therefore the Department cannot make a recommendation regarding raising or lowering the LMI Adder. However, the Department did seek and summarize feedback on the LMI Adder and LMI community solar market in the following section. In preparation of this report, the Department issued a solicitation for written public comment on April 29, 2022, requesting feedback in regard to the LMI Adder.²¹ Three sets of written public comments were received in response to this solicitation. The Department additionally reviewed annual reports from both the LMI Grant Program, and LMI Adder, and conducted informal interviews with LMI stakeholders including past and current program participants, developers, and utilities. This input in combination with Department experience can provide potentially useful observations regarding the effectiveness of these policies in developing the market for LMI Community Solar Projects as defined in 362-F:2, X-a, as well as the broader LMI community solar market. These insights are outlined below.

Program Barriers and Opportunities

A summary of the issues raised through this public process described above, as well as Department experience administering the two incentives, is outlined below along with feedback regarding potential opportunities for market development.

1. Time and Resources Required for Participation

Barriers related to accessing the LMI Adder varied across types of stakeholders, but all reported lack of resources sufficient to pursue the opportunity. It was reported that the high administrative costs, including time, energy, expertise, staffing, and other resources, as well as the high cost of recruitment and management of groups, prevented or restricted participation. Initial as well as ongoing challenges related to LMI group host administration were raised for all project models, and some challenges varied by project type. For example, income verification is a barrier for some projects, while others reported concern with the administrative resources required for ongoing management of groups. Challenges for potential group hosts include reporting requirements, frequent movement of residents in and out of properties, and annual income eligibility reporting.

Potential grant participants as well as past proposers have described the challenges and expense involved in the process of developing LMI community solar projects. The time and resources required to undertake energy project planning at the community scale is significant, additionally so for LMI community projects which involve vulnerable populations, added requirements, and additional risks. Projects can take up to two years from development to operation, sometimes longer if unexpected delays are encountered.

Some of the steps in project development include finding a host and site for projects, community outreach and engagement, finance and legal planning, undergoing permit processes, and preparing responses to an RFP,

²¹ [Legislative Report on Costs and Benefits of LMI Adder | NH Department of Energy](#)

which requires projects be significantly developed before application. The uncertainty of being awarded a grant after up-front costs have been expended was reported to be a barrier to community organizations. ROC projects, like the current LMI Adder project, for example, receive pro bono support from VLS and other legal entities, both leading up to, and after application to incentive programs. Without this technical and legal assistance, it is unclear how successful the ROC model would be.

Stakeholders responsible for implementing the LMI Adder also report additional administrative time required to administer LMI Adder projects.

Market Development Opportunities

RFP Timing and Process

Stakeholders suggested participation in the LMI Grant Program could be improved by providing predictable timing of the funding opportunity from year to year, as well as potentially increasing the open period for the opportunity. This would give potential applicants better ability to plan and prepare proposals. Given the lengthy project planning process, and expenses involved, stakeholders suggested a two-year cycle for their own organizations related to these projects may be more reasonable. They were clear that demand is high for these opportunities, although they may have longer lead times for development than other projects. Stakeholders also urged the Department to consider simplification of what they suggest is a time consuming and complicated process of submitting a proposal in response to the RFP and suggested extending the open period to four months to allow time to respond. There was also concern raised regarding the project stage required for grant application. As one stakeholder stated, the challenge in responding to grant opportunities is that projects “need to be 90% completed before application.”

Seed/Planning Grants

Stakeholders all agreed that planning stage funding could significantly reduce the barriers to participation in the LMI Grant Program and allow more project development. Planning or feasibility grants would likely also allow deeper investigation into the LMI Adder incentive and facilitate more applications for this incentive. The reported costs of administrative work prior to application for the RFP or LMI Adder varies by project type and scale. Scaled funding for organizations to develop projects prior to grant and/or LMI Adder group host application, could result in more, and better, applications for both incentives. Such funding also contributes to the development of area expertise in community organizations interested in pursuing this underserved market and potentially in the LMI community itself.

Education, Outreach, LMI Advisory Support

More outreach and education regarding both programs, and the LMI Adder opportunity in particular, could increase awareness of these incentives, and result in more, and better-informed applications. Creating overview materials that could be made available online, offering public presentations, and connecting with LMI communities and their supporting service organizations could increase participation in both programs, increase the quality of projects, and improve the programs themselves. This outreach would require additional program

staff time.

Clean Energy NH suggested in written comments that “To encourage the LMI community solar market, the Department should consider convening and organizing stakeholders to enable more efficient and effective collaboration across market sectors (developers, hosts/members, utilities, etc.)”. The Department will review further opportunities for stakeholder education and engagement.

2. Organizational Capacity

Eversource, in a summary of LMI RFI feedback submitted through comments, stated “The projects that have been completed to date have required a significant amount of collaboration. The Vermont Law Clinic has helped several projects pro bono, but it can be difficult for non-industry stakeholders to navigate the system and requirements. Historically, LMI community solar projects in New Hampshire have relied on partnerships between hosts, developers, members and other groups to achieve completion”.

Past LMI Grant Program participants have highlighted the added benefit of small community projects pursued by local organizations to build community engagement, connection and collaboration. However, energy project development is often a new and complex area of work for many LMI groups and/or LMI support organizations, and, due to the collaborative nature of projects as well as fundraising needs, there is significant work involved in connecting and coordinating partners. This project model and scale is shown to keep a high amount of benefit in the LMI community, and result in additional non-monetary benefits beyond reducing energy burdens. However, they are often resource-intensive, and the capacity of small organizations limits the number of such projects that can be taken on each year. Jeannie Oliver, Professor of Law at Vermont Law School Energy Clinic who are largely responsible for the development and implementation of the ROC model projects stated:

“The reason we haven’t submitted proposals in the last several RFP rounds is not because of a lack of demand for projects, there is demand, but we don’t have sufficient resources, staffing, expertise to add to our portfolio of projects. Before committing to other projects, we need to fully complete the current projects given the amount of legal and technical expertise required to get the project to the stage of interconnection.”

Further, while community scale projects may also involve some aspect of capacity-building within LMI communities, past grantees report that their experience has shown how complicated such projects are, and how varied legal, financial, procedural issues may be project by project, reporting that it is likely that some level of professional support will always be needed.

Market Development Opportunities

Role for large scale program design

It is appropriate to supplement community-based projects with project models that minimize required administrative resources. These projects may be able to more quickly reduce energy burdens for LMI

communities and reduce administrative costs by piggy-backing off already-existing programs. However, as one stakeholder indicated, the inclusion of investor financing, often required for larger projects, can complicate the distribution of the benefits and limit the financial benefits to LMI families. These projects may also be less effective in addressing non-monetary benefits like community engagement or energy control/education.

Only two developers/installers have participated in the Department's LMI Grant Program in five years since inception, which may indicate a lack of interest alignment with such program models. The potential project designs enabled through the passage of SB 270 (2022), which recently passed both houses of the legislature and is awaiting review and action by the Governor, may provide a more attractive program model for developer facilitated large scale projects.

Support projects and funding that build capacity for this work in LMI support organizations

Towns, governmental agencies, and private non-profits have valuable experience working with LMI communities as well as mission-driven focus on support of LMI individuals. Continued support to build the ability of these organizations to pursue energy-focused projects and develop replicable project models over time is an investment in future market development that effectively impacts the communities for which these programs are designed.

3. Financial Barriers and Opportunities

All LMI community solar projects constructed and operational in New Hampshire, of which the Department is aware, have received funding from the LMI Grant Program. While challenges differ by project model type, all stakeholders raised challenges with financing. Financing is a fundamental challenge to developing the LMI community solar market, and the LMI Grant Program is one approach to addressing some of that challenge. However, public input suggests that resources for both direct project costs, as well as staff time and expense needed for initial project development and implementation are barriers to seeing more projects being proposed and carried forward to implementation.

Compensation Challenges

Eversource reports that their LMI RFI study, as summarized in written comments, found that the declining compensation for solar projects over 100kW limits economies of scale. All nine of the LMI Grant Program projects awarded funds have been at the under 100 kW AC scale, and there are no known operational projects benefitting LMI participants currently over 100 kW AC. Other stakeholders raised the commercial compensation rate as an issue. While not all LMI Adder groups would necessarily utilize commercial meters, most projects thus far involve host meters that are commercial meters and therefore compensated at the commercial rather than residential tariff rate. This is not uncommon for group net metering arrangements. According to Jeannie Oliver, Professor of Law at Vermont Law School Energy Clinic who is largely responsible for implementation of the ROC model "The financial spreadsheets submitted with the RFP proposals show a relatively long payback period for these projects of over 20 years to break even. The adder helps to bring closer to parity with residential rate."

Availability of Financing and Impact on Benefits

Eversource's study summary also noted that the LMI Grant Program funding has been critical to making LMI projects financially viable in NH. VLS also suggested that projects would not happen without the grant and the adder, stating: "Grant funding and the LMI Adder is essential to these projects. I don't believe these projects would happen without those funding streams available. I hope this funding is still around in the future to apply for future RFPs so that we can help more LMI communities adopt renewable energy." Affordable housing properties have shared that obtaining financing can be challenging and complex, citing challenges with fundraising, and one of the AHP stakeholders went on to share that complexities of third-party involvement make direct ownership seem to be the most viable project model for some groups.

In the case of the VLS managed ROC projects, VLS reports that if more funding was available, they could address the challenge of time and resources available for technical assistance. Their projects to date keep the majority of benefit in the community and focus on engagement and resource development of ROCs, however, are resource intensive and limited in scalability.

Economies of Scale

Stakeholder comment received suggested that the DOE's grant funding is insufficient to cover the full cost of most projects, especially those with enough scale to benefit a higher number of LMI families, which creates a financing gap. This requires groups to solicit matching funds from the donor community pursuing funding from donors for projects with high administrative costs and uncertainty. Without donor support, third party equity investors may be engaged, which diminishes the benefits available to LMI participants.

Comments suggested that grant amounts in the LMI Grant Program are not enough to fund larger projects which could benefit from economies of scale but require higher amounts of up-front capital. Commentors additionally suggested that including system size caps is potentially limiting economies of scale. Clean Energy New Hampshire submitted written comments that pointed to current project caps as one of the most significant economic barriers to developing LMI community solar.

Market Development Opportunities

Availability of Financing and Impact on Benefits

In the short term, the Department could pursue opportunities to expand internal knowledge of community solar financing with a goal of using additional knowledge to review programs for potential opportunity to explore models which further leverage financing. For example, while the primary focus of the LMI Grant Program is, and will continue to be, direct benefit to LMI participants, the Department could consider developing internal knowledge of relevant financing issues, in order to review and consider incorporating some small element of proposal evaluation that considers funding models, bringing in additional funding sources without sacrificing LMI benefit, increasing project or program sustainability, market development design plans; scalability etc.

Compensation Challenges

The LMI Adder helps to bring project compensation closer to parity with the residential rate, but some commentors have suggested the state may consider a limited exception allowing LMI Community Solar Projects to be compensated at the residential tariff rate regardless of meter designation. Net metering project cap expansions similar to those recently enabled for town group net metering projects, were also suggested by stakeholders.

Economies of Scale

Potential LMI Grant Program participants have indicated that the project funding cap for the LMI Grant Program should be increased. Developers also suggested project size caps are a barrier. The Department could consider removing or adjusting the funding cap to open the program to more potential projects, however such considerations would need to be reviewed to ensure offering adequate project opportunities with limited funding.

4. Group Host Application and Management Process

The current eligible LMI Adder GNM project reported issues with the application process for becoming a group host eligible to receive the LMI Adder. Energy staff is working with utility teams to develop this new application review process and coordinate to decrease processing time for applicants. Delayed review and processing time due to a number of issues from all groups involved resulted in a lengthy approval process and delayed access to the LMI Adder incentive.

Utilities reported that clarifications, corrections, and changes while applications are in-process, are a challenge for the processing of non-LMI GNM registrations. Members moving, death, clerical error, member changes, delayed agency review, and data privacy concerns related to needed application changes contributed to the difficulty in approving the case study GNM application. Because there has been only one LMI Adder applicant as of this report, it remains to be seen if the application challenges that impacted this group are endemic issues or unique to this application, but administrators have noted potential issues and plan to monitor in future projects.

LMI groups are required to use on-bill crediting, an important tool for monitoring benefit to LMI customers. Other groups are also allowed to take advantage of this new crediting option, and some have transitioned to on-bill credits. Both utilities and group hosts have communicated that management of on-bill crediting is administratively challenging. With the passage of SB 165 (2019) and further guidance from the Puc900 rules, utilities have been working to stand up the systems to meet new requirements. Utilities report on-bill crediting challenges including manual, or largely manual processing, data-sharing and customer privacy requirement challenges, as well as confusion from members regarding the role of utilities and hosts. While there are relatively few on-bill credit groups, currently there are eleven approved on-bill credit GNM registrations, the expansion of these types of groups, including LMI Adder groups, could result in significant costs related to program administration and should be monitored as participation in these programs increase. Utilities are

working to meet new requirements regarding access to member electric information for groups hosts while addressing privacy concerns, and delays in accessing this information have been reported as an issue by group hosts.

Market Development Opportunities

The administrative requirements for group net metering hosts and group members, including the annual reporting requirements, could be reviewed for opportunities to make changes that may reduce administrative burden without adversely affecting the purpose of the applicable requirements. For example, annual reporting regarding electricity exported by the group host facility, and usage by the group host and members, utilizes specific electric utility data. Hosts and members may struggle with understanding their electric bills, finding the correct information as required, and obtaining and submitting the necessary information in the correct form. These challenges may result in significant time and effort for group hosts and members, as well as involving customer support from both the utilities and Department staff. Reviewing with the utilities the potential to implement technical solutions using internal utility data and systems to review some, if not all of the information submitted through annual reports and determining if such solutions could create net efficiency gains, may present opportunities to reduce administrative burdens that have been cited as challenges by group hosts, group members, utility personnel, and Department staff. And it might also serve to address data privacy concerns that have been reported as related challenges.

5. Program Eligibility

Stakeholders raised the narrowness of eligibility criteria for participation in both incentive programs as a material barrier to full market participation. In particular, the statute enabling the LMI Grant Program, RSA 362-F:10, X, allocates funding “to program(s) that benefit low-moderate income *residential customers...*” (emphasis added). Likewise, the LMI Adder is available for an LMI Community Solar Project as defined in RSA 362-F:2, X-a as a “ground-mounted or rooftop solar arrays that directly benefit a *group of at least 5 residential end-user customers*, where at least a majority of the residential end-user customers are at or below 300 percent of the federal poverty guidelines...” (emphasis added) “End-use customer” is defined in RSA 362-F:2, IX as “any person or entity that *purchases electricity supply at retail* in New Hampshire from another person or entity...” (emphasis added).

Those express reference to residential end user customers in the relevant statutes preclude from program eligibility those LMI residents for whom utility charges are included in their rental arrangements, because they do not receive utility bills in their names and therefore are not “customers” of the electric utility. While an LMI community solar project seeking to participate in both programs may include affordable housing projects with LMI tenants who do not pay electric bills (if those tenants would be directly benefited by that participation), it would be necessary also to include LMI residential user customers meeting the specific eligibility requirements for those projects to qualify for either incentive program.

The end user customer eligibility requirement was raised specifically by affordable housing project representatives, who provided feedback that a large untapped demand exists from affordable housing projects that include utility charges in their rental arrangements. Multiple representatives of such affordable housing projects reported that, by design, their facilities include electric utility charges in the rents charged to tenants, as that practice can reduce variability in monthly financial obligations for LMI residents, create a single point of contact for the utility, and lower administrative burdens for the residents. Based on the current statutory language, such affordable housing projects are not eligible for either program without including participation from additional participants who are individual LMI residential electric customers. According to those stakeholders, that requirement creates additional recruitment and administrative barriers to accessing the incentive programs.

6. LMI Adder Awareness and Understanding

Some stakeholders were not aware, or are only vaguely aware, of the LMI Adder incentive opportunity. Even upon learning of the LMI Adder, one potentially eligible stakeholder indicated that the complexity of the process of receiving the adder was a deterrent from pursuing the adder. There is only one project eligible to receive the LMI Adder, and minimal group net metered projects in each utility's territory that have registered to receive on-bill crediting. Education and outreach could be expanded to increase awareness of these programs.

Additional Observations

Below are additional observations that were highlighted through stakeholder feedback regarding the implementation of the LMI Adder and the development of the LMI community solar market more generally. These are observations that may be useful to consider when developing additional programs, making program changes, or pursuing further work in this area.

Cyclical nature of LMI Community Solar Projects

Community-scale energy project planning involves the coordination of many actors, and such projects can often take multiple years to develop even without bringing in the LMI component. Many stakeholders reported demand is there for these kinds of projects, and they are only limited by the limited available expertise, staffing, and resources to develop projects. Programs that reflect this reality may increase effectiveness and efficiency.

Space and need for different project and program models

Public feedback and comments highlight that project barriers and benefits often differ by project model, and further that there appears to be demand, space, and a role for differing project models and programs to address different populations and goals. The variety of feedback suggests that the current status of the market is a "Both, And" situation rather than an "Either, Or" when it comes to LMI market development programs needs.

Eversource's RFI summary comments stated that respondents "indicated they would be interested in partnering with a Utility to identify and enroll income-eligible members. Some respondents indicated they would like to see an LMI community solar pilot program take the form of a scalable solution as opposed to a project-based example." However, SB 270 (2022) leaves out some LMI community members. Sandra Jones of Plymouth Area Renewable Energy Initiative (PAREI) alternatively stressed the benefit and importance of community level projects specifically because the work necessitates community engagement, building partnerships and interacting at the local level to support LMI residents.

Some stakeholders suggested ROCs interest drying up, while others report high demand in the ROCs; however significant resources are required for these kinds of projects. This may represent differing interests in different kinds of potential projects among possible project facilitators. Different groups may find different kinds of projects or models of interest based on their motivations and goals, and keeping opportunities open for a variety of project models will increase the breadth and depth of work in this area.

There is belief amongst stakeholders that the projects could happen with lower administrative commitments if the developer community were to become excited about an LMI project, and belief that there are developers that have the skill and capability to facilitate this work providing their interests align.

Despite the LMI Adder not being available to projects located in the territory of New Hampshire Electric Cooperative, a project received LMI grant funding and was constructed in Plymouth thanks to collaborative efforts between a community based non-profit organization, a local business, and the local utility to provide direct benefits to LMI customers.

As outlined above, SB 270 which has recently passed both houses of the legislature and is awaiting review and action by the Governor, enables large-scale projects, reduced barriers to customer acquisition and income verification, reduced costs for ongoing group management, and automatic access to benefits for utility customers on, or on the waitlist for EAP, should one be established. This model has the potential to reach a high quantity of LMI customers quickly and with low administrative costs. It also allows LMI customers to access benefits at no cost to themselves and immediately with minimal effort.

However, this program model is limited in availability to LMI end-user customers who are already receiving assistance. Further, the total direct benefit available to LMI participants remains to be evaluated and may not approach the direct benefit levels of other project models. A large scale opt-out program also may not address non-monetary benefits like community engagement, or energy choice education. This approach is a good way to reduce energy burden and quickly develop traditional, larger-scale projects, impacting more LMI customers potentially with less up-front public funding. Long-term LMI benefit as compared to community-ownership models, as well as long-term costs will need to be studied over time.

Current community-based project models have been found to address a different population, including those not necessarily receiving energy assistance and moderate income residents, and may be managed by a different group of owner organizations, focused on community engagement, expertise development at the community organization level, and opportunity for LMI customers, and the organizations that support them to have access and ability to make choices regarding their energy that are historically afforded to communities with more

capital. Community ownership models specifically also appear to allow LMI communities and support organizations to capture much of the wealth generation/benefits from such opportunities. However, these projects so far are frequently smaller in scale, resource intensive, and require more up-front capital to achieve community ownership. The capacity building for grantees under VLS guidance, for example, has a high cost. It adds significant benefit in that it increases the community's energy sovereignty, or ability to have knowledge, choice, and control over their energy costs, but also creates challenges for the organization in developing additional projects.

Feedback indicates that different project models are designed to address slightly different goals and offer important benefit to LMI communities, and additionally indicates there is demand and need for multiple types of project models along the spectrum in New Hampshire. Because these programs are relatively new, and in the case of SB 270, completely new, future review would be valuable to compare impacts of different project models and may provide insight into how to most efficiently and effectively implement these programs.

LMI projects fundamentally contain additional complexities

For all the right reasons, programs focused on the LMI market will be less lucrative, more complex, and harder “nuts to crack” as a rule. In limited instances, early LMI community solar programs in other states resulted in LMI customers paying more for electricity, and taught program staff across the US valuable lessons in LMI program design. In order to protect vulnerable populations, there is often a need for additional requirements, reporting and oversight for LMI programs. To ensure the right populations are accessing programs designed for the LMI market, there is need for income verification which can be costly and complicated to manage. LMI communities can be additionally difficult to recruit for several reasons including lack of resources like time to learn about and pursue such opportunities and disproportionately face additional challenges like frequent moving, or poor credit.

Stakeholders reported additional challenges that are frequently cited issues in most community-scale solar development including:

- Adjoining landowner objections
- Permitting challenges
- Payments In Lieu of Taxes municipal negotiations
- High costs associated with interconnection

These issues are challenges for general market and LMI community solar and could benefit from review at the state or local level.

CONCLUSION

A review of the current market for LMI community solar based on public input as outlined above indicates there is demand for renewable energy options and accompanied savings in LMI communities, and demand for programs that support LMI community solar project development. It further shows that LMI programs are currently necessary for project development and that project development is currently limited by the resource barriers of implementing groups.

There is not currently sufficient data to conduct analysis regarding the costs and benefits of the LMI Adder policy and therefore the Department cannot make a recommendation regarding raising or lowering the LMI Adder. Rules were finalized for the LMI Adder in 2020, two years prior to the writing of this report. Given the development time for these projects cited by stakeholders, reviewing the policy at the five-year mark may provide more data for review. However, in regard to limited current participation, continued barriers raised by stakeholders included time and resources to participate in programs, organizational capacity limiting projects, financing, administrative costs, GNM administration and reporting, and eligibility issues.

Project reviews highlighted that the time and resources required to undertake energy project planning at the community scale is significant, additionally so for LMI community projects which involve vulnerable populations, added requirements and additional risks. Project development will be slow given the complex nature of this market; however, progress is being made, and long lead times are justifiable in a new market addressing a historically difficult population to serve. It is necessary to offer opportunities to try, and learn from, different models, as well as the experiences in other states as more focus is put on this aspect of renewable energy development. Patience, effort, and adequate support is necessary to create a market that more equitably distributes benefits of renewable energy policy and prevents further gaps in energy affordability that not only leave LMI ratepayers out of benefits but may create a disproportionately negative impact for them.

Required reporting provides a formal structure for all groups involved in implementation of these policies to talk through programs, learn from each other, reflect on past successes and identify opportunities to improve the work. The LMI Grant Program has been in existence for five years, the LMI Adder rules guidance effective for two years, and SB 270 has not yet been implemented. Requiring additional periodic program review and enabling the data collection necessary for such reviews would allow further reflection, evaluation and program improvement over time. The Department suggests another report on this topic in 2025; this should allow maturation of current programs as well as initial insight into the impact of the SB 270 (2022) program model.



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