

THE STATE OF NEW HAMPSHIRE

BEFORE THE

NEW HAMPSHIRE PUBLIC UTILITIES COMMISSION

**JOINT TESTIMONY OF ANDREW C. BELDEN, BRIAN J. RICE AND
KATHERINE W. PETERS**

PUBLIC SERVICE COMPANY OF NEW HAMPSHIRE D/B/A EVERSOURCE ENERGY

CLEAN INNOVATION COMMUNITY SOLAR PILOT PROPOSAL

Docket No. DE 19-XXX

1 **Q. Mr. Belden, please state your name, business address and position.**

2 A. My name is Andrew C. Belden. My business address is 247 Station Drive, Westwood,
3 MA 02090. My position is Director, Customer Solar Programs at Eversource Energy
4 Service Company and in that position I provide service to the operating companies of
5 Eversource Energy including Public Service Company of New Hampshire d/b/a
6 Eversource Energy (“Eversource” or “the Company”).

7 **Q. Have you previously testified before the Commission?**

8 A. No. I have not.

9 **Q. Please describe your educational background and professional experience.**

10 A. I graduated from Cornell University in Ithaca, NY in 2000 with a Bachelor of Science
11 degree in Biological Sciences and received a Master in Energy and Environmental Policy
12 in 2009 from the University of Delaware in Newark, Delaware. I have been employed at
13 Eversource since March 2019. My present responsibilities include overseeing teams that

1 manage customer solar PV programs across the company's three states. Previously I
2 worked for the Massachusetts Clean Energy Center (MassCEC) as the Senior Director for
3 Renewable Energy Generation where I oversaw incentive programs for a range of clean
4 energy technologies. Prior to my employment at MassCEC, I was a consultant providing
5 services to state and local governments related to clean energy policy and programs.

6 **Q. Mr. Rice, please state your name, business address and position.**

7 A. My name is Brian J. Rice. My business address is 247 Station Drive, Westwood, MA
8 02090. My position is Manger, Regulatory Projects at Eversource Energy Service
9 Company and in that position I provide service to the operating companies of Eversource
10 Energy including the Company.

11 **Q. Have you previously testified before the Commission?**

12 A. Yes. I submitted testimony pertaining to cash working capital requirements associated
13 with Energy Service in Docket No. DE 16-822. I have also testified before the
14 Massachusetts Department of Public Utilities in several proceedings related to solar
15 program design, revenue requirements and cost recovery.

16 **Q. Please describe your educational background and professional experience.**

17 A. I graduated from Union College in Schenectady, NY in 2004 with a Bachelor of Science
18 degree in Industrial Economics and received a Master of Business Administration degree
19 with a concentration in corporate finance in 2011 from the Boston College Carroll
20 Graduate School of Management in Chestnut Hill, Massachusetts. I've held multiple
21 Senior Analyst positions in different functions at Eversource since 2011. My present
22 responsibilities include managing analysis and projects in support of enterprise-wide

1 regulatory initiatives across Eversource's operating businesses. Previously I supported
2 wholesale energy and renewable energy certificate procurement activities for Eversource.
3 Prior to joining Eversource I held consulting positions covering various segments of the
4 energy and utility industries.

5 **Q. Ms. Peters, please state your name, business address and position.**

6 A. My name is Katherine W. Peters. My business address is 73 West Brook Street,
7 Manchester, NH 03105. My position is Supervisor, Regulatory Planning and Evaluation
8 and in that position I provide service to the Energy Efficiency programs operated by the
9 Company.

10 **Q. Have you previously testified before the Commission?**

11 A. Yes. I have testified before the Commission in Docket No. DE 17-136.

12 **Q. Please describe your educational background and professional experience.**

13 A. I graduated from Cornell University in Ithaca, NY in 2002 with a Bachelor of Arts degree
14 in Government. I've held multiple positions in implementation and planning for the New
15 Hampshire energy efficiency programs at Eversource since 2013. My present
16 responsibilities include regulatory proceedings and stakeholder engagement related to the
17 energy efficiency programs, as well as program planning, coordination and outreach.
18 Prior to joining Eversource I managed the federally funded Better Buildings energy
19 efficiency program at the New Hampshire Community Development Finance Authority
20 and held several positions in the office of Governor John H. Lynch and the New
21 Hampshire State Senate.

1 **Q. What is the purpose of this testimony?**

2 A. In Order No. 26,029 issued on June 23, 2017 in Docket No. 16-576, the Commission
3 directed Eversource to develop a pilot program that uses monetary bill credits to make the
4 benefits of solar distributed generation (“DG”) ownership available to low and moderate
5 income (“LMI”) customers whose circumstances would otherwise not allow them to
6 participate in a net-metered renewable energy project. The purpose of this testimony is to
7 describe the Clean Innovation Community Solar pilot that Eversource has developed and
8 is requesting approval from the Commission to conduct.

9 **Q. How is your testimony organized?**

10 A. Our testimony begins with an overview of the Company’s experience and research into
11 various solar program structures and the participation of LMI customers in those
12 programs. We then describe the compensation and bill credit approach the Company
13 proposes to pilot in the interest of overcoming common barriers to LMI customer
14 participation in solar programs. The Company’s plans for participant selection, program
15 administration, coordination with energy efficiency programs and evaluation,
16 measurement & verification (“EM&V”) are then described. Lastly, the estimated costs of
17 the pilot and proposed recovery of those costs are summarized.

18 **I. BACKGROUND ON LMI SOLAR PARTICIPATION**

19 **Q. Please describe the Company’s experience supporting administration of solar**
20 **programs?**

21 A. The Company’s experience with solar programs is extensive. The Company and its
22 affiliates have central roles in interconnecting distributed solar generation, administering

1 net metering tariffs and supporting solar programs across three New England states -
2 New Hampshire, Massachusetts and Connecticut. Over 1,300 MW of distributed solar
3 generation is interconnected to the distribution systems of the Company and its affiliates
4 and various forms of net metering exist in every market in which they operate. The
5 Connecticut Light and Power Company has been administering procurement of
6 distributed solar energy through the LREC/ZREC program since 2012 and supported a
7 Shared Clean Energy Facility pilot that targeted LMI customers in 2017. NSTAR
8 Electric Company, along with the other Massachusetts electric distribution companies,
9 implements the 1,600 MW Solar Massachusetts Renewable Target (“SMART”) Program
10 via a tariff-based mechanism and owns and operates 70 MW of utility-scale solar
11 generation. The Company has learned a great deal from its experience and the
12 experience of its affiliates over many years and has built upon that experience to develop
13 an LMI solar pilot program that it hopes will overcome administrative and financial
14 challenges that have been barriers to LMI customer participation in other solar programs.

15 **Q. What has been the relative participation of low-income customers in net metering**
16 **and other solar programs?**

17 A. Net metering and solar programs in New Hampshire and elsewhere have provided many
18 customers the opportunity to reduce energy bills by installing onsite solar photovoltaic
19 (“PV”) generation and participating in various forms of net metering. However, the
20 participation of LMI customers in these programs has lagged that of other customers in
21 many markets¹. Eversource does not collect income data on customers that participate in

¹ Barbose, Galen, Naïm Darghouth, Ryan Wiser, Ben Hoen, and Dev Millstein. 2018. *Income Trends among Residential Solar Adopters*. Lawrence Berkeley National Laboratory.

1 net metering or other solar programs, so it is not possible to say exactly how many LMI
2 customers participate, but indications are that the proportion is low. Approximately
3 23,000 customers, more than 4 percent of customers served by the Company, are
4 presently enrolled in the New Hampshire Electric Assistance Program (EAP) to receive
5 discounted electric service based on income-eligibility. However, less than 1 percent of
6 customer accounts that receive net metering credits from the Company are presently
7 enrolled in EAP².

8 **Q. What are some of the barriers to LMI customer participation in solar programs?**

9 A. There are numerous reasons for low participation in solar programs among LMI
10 customers that are well documented. A smaller proportion of LMI customers may own
11 the property that they reside in, and even if they do the property may include older
12 structures that are not suitable for installation of rooftop on site solar generation without
13 additional costly improvements³. Financial challenges create further barriers. Fewer
14 LMI customers have the funds necessary for an upfront purchase of a solar installation
15 and many may also lack the credit necessary to finance or lease a system⁴. Community
16 or shared solar arrangements have been developed in many solar markets to encourage
17 participation of customers who are unable to purchase a PV system or construct it on
18 their property. However, the financial barriers for low income solar ownership often
19 apply to community solar projects as well. LMI customers are less likely to have the

² Does not include EAP customers who are members of group net metering projects operating in the Company's service area.

³ Cook, Jeffrey J, Lori Bird, 2018. *Unlocking Solar for Low- and Moderate-Income Residents: A Matrix of Financing Options by Resident, Provider, and Housing Type*. National Renewable Energy Laboratory

⁴ *ibid*

1 funds to acquire a share of a community solar development and may not be viewed
2 favorably as subscribers by financial sponsors of projects.

3 **Q. Are you aware of approaches that have been tested to overcome barriers to LMI**
4 **customer participation in solar programs?**

5 A. Yes. A variety of strategies have been tested to increase LMI participation in solar
6 programs with varying levels of success. Programs the Company has examined
7 encourage LMI participation through shared solar arrangements by establishing
8 participation requirements, providing LMI incentives, or through direct investment in
9 solar generation. The Company reviewed several shared solar programs that reserved all
10 or a portion of eligible capacity within the program for solar facilities that served low-or-
11 moderate income customers. New Jersey's recently launched Community Solar Energy
12 Pilot Program reserved 40 percent of the 225 MW program enrollment limit for projects
13 that have at least 51 percent of project capacity subscribed by LMI customers⁵.
14 Maryland's Community Solar Pilot similarly reserved 60 MW out of 193 MW statewide
15 for projects that provided more than 30 percent of output to LMI customers⁶. Other
16 community solar programs have required that a portion of capacity from a facility be
17 reserved for LMI customers as a condition of eligibility. Colorado established a 5
18 percent LMI participation minimum for eligible projects in a program launched pursuant
19 to the Community Solar Gardens Act (2010) which was subsequently revised in favor a

⁵ Community Solar Energy Pilot Program Rules at N.J.A.C. 14:8-9

⁶ COMAR 20.62

1 portfolio-based requirement⁷. Projects eligible for participation in the Connecticut
2 Shared Clean Energy Facility Pilot were similarly required to have LMI customers utilize
3 at least 20 percent of annual output from a facility. LMI participation requirements either
4 on a project or program level effectively ensure minimum levels of LMI participation.
5 However, they also have the potential to serve as an artificial limit on LMI participation
6 and be viewed as another project cost – particularly if maintaining LMI enrollment is
7 administratively burdensome and project credit is given away to LMI participants⁸. The
8 pilots with LMI carve-outs in New Jersey and Maryland, as well as the portfolio
9 requirement in Colorado, are also recently launched so final conclusions on their ultimate
10 effectiveness may be premature.

11 Other solar programs the Company is familiar with provide additional credit to incent the
12 development of shared clean energy projects that provide benefit to LMI customers. The
13 design of the Massachusetts SMART Program provided up to an additional 6 cents per
14 kWh for Low Income Community Shared Solar facilities that allocated at least 50 percent
15 of output to low income customers as well as provided the highest compensation rates, up
16 to 39 cents per kWh, to facilities less than 25 kW that serve low income customers⁹.
17 However, initial indications are that the incentives provided in the program design for
18 SMART may not be supporting the intended levels of low-income participation. Over
19 800 MW of capacity have enrolled or applied for the program within the first six months
20 following launch, but less than 20 MW have been identified as low-income solar

⁷ Heeter, Jenny, Lori Bird, Eric O'Shaughnessy, and Sam Koebrich. 2018. *Design and Implementation of Community Solar Programs for Low- and Moderate-Income Customers*. National Renewable Energy Laboratory.

⁸ *ibid*

⁹ 225 C.M.R. 20.00 Solar Massachusetts Renewable Target Program

1 facilities. Stakeholders had expressed concerns during the design and approval process
2 that the incentives included in the SMART program design would be insufficient to
3 promote low income customer participation and favored other revisions to the program
4 design. In particular, stakeholders supported revisions that would allow for no-cost
5 credits to be provided to low income customers in order to avoid contractual and
6 financing barriers to the participation of low-income customers. The Massachusetts
7 Department of Public Utilities has directed that participation of low-income customers be
8 monitored and modifications to the program be considered if necessary¹⁰.

9 The last approach the Company reviewed for sharing the benefits of solar with LMI
10 customers was the provision of direct, no-cost credits to LMI customers from facilities
11 owned by a distribution company. Consolidated Edison is providing benefits to LMI
12 customers while making direct investments in solar energy as part of a Shared Solar Pilot
13 Program¹¹. The Company is aware of other solar program design approaches aimed at
14 increasing LMI participation, but the programs and design features described above were
15 most relevant to the Company's development of the proposed Clean Innovation
16 Community Solar pilot. The review of other solar programs highlighted the potential
17 administrative and financial barriers to LMI participation in shared solar projects that the
18 Company seeks to address with the Clean Innovation Community Solar pilot design.

¹⁰ D.P.U 17-140- A, *Order Approving Model SMART Provision*, September 26, 2018

¹¹ Case 16-E-0622, *Order Approving Shared Solar Pilot Program with Modifications*, August 2, 2017

1 **Q. Are there presently options for NH LMI customers to participation in a shared solar**
2 **project?**

3 A. Yes. RSA 362-A:9, XIV permits net-metered renewable energy facilities to become
4 group hosts and share the proceeds from surplus electricity generation with other electric
5 customers, including LMI customers, through group net metering. To be eligible for
6 group net metering a renewable energy facility must complete several initial and ongoing
7 activities. A group host must, among other things:

- 8 (1) Identify a group of customers within the same electric distribution company
9 service territory and whose total historic load, combined with that of the host,
10 exceeds the projected annual output of the generation facility.
- 11 (2) Execute agreements with members which includes procedures by which the host
12 will allocate and make payments to, and allocate and collect payments from, its
13 members.
- 14 (3) Establish procedures for members to be added or removed from the group and
15 define those procedures in agreements with members.
- 16 (4) Register with the Commission by providing, among other information, a list of all
17 members in the host's group, including each member's name, billing address,
18 service address, account number, meter number, and projected annual load.
- 19 (5) Provide annual reports to the Commission that lists group members that have been
20 added or removed from the group and a calculation, with supporting documents,
21 of the total electricity generated by the host's facility, the host's load, the load of

1 each member used to offset the host's generation, and the combined load of all the
2 members.

3 The full list of requirements for group net metering facilities is presented in Puc 909 and
4 represents a meaningful administrative obligation for a group host to acquire, manage and
5 report on a group of customers participating in a shared solar project. Responsibilities of
6 the group host also include execution of procedures to allocate and make payments to,
7 and allocate and collect payments from, its members.

8 The benefits for renewable energy facilities that register as group hosts are the ability to
9 receive payment from the electric distribution company for surplus generation at the end
10 of each billing period. This provides additional cash flow to the host customer and
11 proceeds to be shared with group members. Small customer-generators with total peak
12 generation capacity equal to or less than 100 kW receive payment for surplus generation
13 based upon all applicable charges that are assessed on kilowatt hour usage. Large
14 customer-generators up to 1,000 kW who are group hosts receive payment for surplus
15 generation at the default service rate of the distribution company. Registration as a group
16 host also enables larger customer-generators whose onsite consumption is less than 20
17 percent of the output from the renewable generation facility to receive compensation for
18 surplus generation at the default service rate instead of a lower avoided cost rate.

19 **Q. Are there group net metering facilities that provide benefits to LMI customers?**

20 A. Yes. The Company is aware of group net metering facilities that benefit LMI customers
21 even though it does not track LMI customers that are members of group net metering
22 facilities. The Commission, through its Renewable Energy Fund LMI Community Solar

1 Grants Program, has provided funding to group net metered projects that serve LMI
2 customers. There are likely other instances of LMI customers participating in group net
3 metering arrangements, but the expectation is that LMI participation remains low.

4 **Q. Are there barriers to LMI customer participation in group net metering?**

5 A. Yes. Several apparent barriers remain to significantly growing LMI participation in
6 group net metering. The administrative obligations of group hosts are the first obstacle.
7 Becoming a group host requires successful management of several customer-facing
8 processes. A group host must recruit customers, successfully obtain account information
9 from them and execute agreements. This must be done for a sufficient number of
10 customers to have a total customer load greater than total production from the facility.
11 Sufficient enrollment in the group must then be maintained by likely recruiting additional
12 members as existing ones leave the group. Administrative considerations for group hosts
13 encourage enrolling the smallest possible number of customers necessary to meet
14 eligibility requirements and favoring customers who can be readily communicated with
15 and who are less likely to have to be replaced. Group hosts may understandably prefer a
16 group that includes a handful of commercial, industrial or municipal customers with large
17 loads to one comprised of a high volume of residential LMI customers.

18 Providing cash payments to group hosts has also been identified as a potential
19 disadvantage of group net metering with respect to LMI participation. If group hosts were
20 to share cash proceeds directly with LMI customers, those payments could be viewed as
21 income to such customers and impact their eligibility for a variety of income-based
22 assistance programs.

1 **Q. Are there barriers to LMI customer participation in other shared solar**
2 **mechanisms?**

3 A. Yes. Shared solar models that require host customers to obtain cash payments from
4 participating customers have been identified to be a barrier for LMI participation. One
5 advantage of group net metering as it exists today in New Hampshire is that it's possible
6 for a group host to collect nearly all revenue directly from the distribution company
7 through payments for surplus generation. A group host will likely share a portion of
8 those revenues with group members to maintain eligibility, but in many cases the group
9 host can avoid having to obtain cash payments from member customers. That may not be
10 the case when host solar facilities are required to, or choose to, direct most credit for
11 surplus generation to the electric bill of participating customers. When credit is applied
12 on the bill of participating customers then the host customer can only obtain revenue for
13 that credit by obtaining cash payments from customers in exchange for the credit. LMI
14 customers may be perceived to have lower quality credit so shared solar facilities that
15 rely on cash flow from participants, and that have high levels of LMI participation, may
16 be viewed to carry greater risk. The increased risk assessment can make facility financing
17 difficult and expensive, if not impossible to obtain¹².

¹² *Shared Renewable Energy for Low-to-Moderate-Income Consumers: Policy Guidelines and Model Provisions*, Interstate Renewable Energy Council 2016

1 **Q. Are there other considerations with respect to the participation of LMI customers in**
2 **solar programs?**

3 A. Yes. Purchase, lease or subscription agreements associated with most solar and net
4 metering projects are often unregulated transactions between customers and third-party
5 solar providers. The potential exists for customers to be induced to acquire solar energy
6 at rates that are uncompetitive and produce net increases in electric expense rather than
7 savings. The prevalence of harmful marketing practices in low-income communities has
8 been well documented in New England competitive electric supply markets¹³ and the
9 Company is aware of instances in which low-income customers have agreed to lease net
10 metered solar facilities at rates that substantially increased their energy expenses after
11 being provided false and misleading materials. The Company finds consumer protection
12 considerations are important to any LMI solar program design given that Low-income
13 customers may be particularly vulnerable and disproportionately harmed by deceptive
14 marketing of solar net metering products.

15 **II. SUMMARY OF PROPOSED CLEAN INNOVATION COMMUNITY SOLAR**
16 **FRAMEWORK**

17 **Q. Please explain the Company's objectives for the Clean Innovation Community Solar**
18 **pilot.**

19 A. The Company developed its objectives and design for the Clean Innovation Community
20 Solar pilot based on experience and observations from other solar programs and

¹³ Bosco, Jennifer, *Competing to Overcharge Consumers: The Competitive Electric Supplier Market in Massachusetts*, National Consumer Law Center 2018.

1 discussion with stakeholders, including discussions and comments from the LMI solar
2 pilot working group facilitated by the Commission. The primary objective of the
3 Company for the Clean Innovation Community Solar pilot is to explore a different shared
4 solar model that has the potential to make financial savings from solar programs more
5 accessible to LMI customers by removing or reducing existing financial and
6 administrative barriers to LMI participation in shared solar. The Company also sought to
7 develop a model that engaged customers and communities; provided consumer
8 protection; integrated well with existing systems, tariffs and programs; and was
9 potentially scalable to support larger levels of LMI participation in the future.

10 **Q. Please summarize the design the design of the Clean Innovation Community Solar**
11 **pilot?**

12 A. The Clean Innovation Community Solar pilot is largely based on the existing model for
13 group net metering in New Hampshire, but with several meaningful adjustments aimed at
14 encouraging the development of solar facilities that share benefits with LMI customers.
15 First, the Company proposes to significantly reduce the administrative requirements for
16 group hosts that participate in the pilot by largely relieving them of the responsibility to
17 recruit, identify and manage customers within a group, including any responsibilities for
18 the group host to allocate and make payments to, and allocate and collect payments from,
19 its members. Instead, the Company will utilize existing resources in place to support
20 EAP customers, and make reasonable modifications to its billing systems, to identify and
21 provide bill credits to income-eligible customers already enrolled in EAP. Second, the
22 Company proposes to enhance the value that facilities participating in the pilot can

1 provide to the EAP customers by awarding additional compensation for surplus
2 generation. Lastly, to maximize the potential benefits that the program can create for
3 EAP customers, the Company proposes to permit projects up to 5 MW to participate in
4 the pilot.

5 **Q. What is the Electric Assistance Program?**

6 A. The Electric Assistance Program is a statewide program that provides qualifying
7 customers with a discount on their monthly electric bill. EAP was created at the direction
8 of the NH Legislature as part of electric restructuring. All electric utility customers
9 support the statewide EAP through the Systems Benefit Charge (SBC) portion of their
10 electric bill. The process for enrollment and renewal of customers in EAP is supported by
11 Community Action Agencies (CAAs) throughout the state.

12 Eligibility and discount amounts are based on the gross household income and the
13 household size. As such, customers must submit documentation for approval to CAAs.

14 The eligibility requirement for maximum gross household income is currently established
15 at 200% of the Federal Poverty Guidelines (FPG) for the Weatherization Assistance
16 Program. Eligibility requirements for 2018-2019 are listed in the charts below by income
17 and by tier.

1

Income at 200% FPG Weatherization Program

<u>Household Size</u>	<u>30 Days</u>	<u>365 Days</u>
1	\$1,996	\$24,280
2	\$2,706	\$32,920
3	\$3,416	\$41,560
4	\$4,126	\$50,200
5	\$4,836	\$58,840
6	\$5,546	\$67,480
7	\$6,257	\$76,120
8	\$6,967	\$84,760

2

2018-2019 EAP Eligibility Requirements by Tier

<u>Tier</u>	<u>Discount</u>	<u>% of Federal Poverty Guidelines</u>
2	8%	151% to 200%
3	22%	126% to 150%
4	36%	101% to 125%

5	52%	76% to 100%
6	76%	Up to 75%

1

2 **Q. How are customers enrolled in EAP and how does the Company provide them**
3 **benefits today?**

4 Customers eligible for enrollment in EAP are identified by CAAs who provide updated
5 lists of eligible customers to the Company on a regular basis. The Company updates
6 customer service plans and profiles based on information provided by CAAs, applying or
7 removing the EAP discount within Eversource’s billing system, “C2”. The EAP discount
8 is applied to a customer’s bill as a discounted percentage, based on applicable income
9 tier, on the first 750 kWh used.

10 The resources already in place for EAP to verify income-eligible customers,
11 communicate information on LMI customers to the Company and separately identify
12 those customers in the Company’s billing systems can all be directly applied to the
13 implementation of the Clean Innovation Community Solar pilot. Designing the pilot to
14 benefit EAP customers eliminates the need to duplicate these activities at additional cost.

15 **Q. Are all LMI customers enrolled in EAP?**

16 A. No. The Company does not expect all LMI customers in its service territory are enrolled
17 in EAP. There may be customers who meet the income-eligibility requirements for EAP
18 but who have not gone through the steps to enroll through a CAA. Customers who may
19 be considered to have a moderate income may also not meet income eligibility

1 requirements for EAP. However, the Company finds it reasonable to conduct a pilot that
2 would only provide benefits to EAP customers at this time. As of April 1, 2019 there
3 were 23,773 customers within Eversource's service territory enrolled in EAP, so there is
4 ample opportunity for selected projects to provide benefits to customers through the pilot.
5 A summary of EAP customer enrollment by Community is provided as Exhibit CICS-2.
6 The Company also expects that the Clean Innovation Community Solar pilot will
7 effectively inform future rate designs that could be readily structured to incorporate a
8 larger pool of LMI customers provided additional processes for identifying other LMI
9 customers were established and supported.

10 **Q. Why does the Company propose that the bill credits be provided to EAP customers?**

11 A. Designing the program to benefit EAP customers provides several advantages. It enables
12 the Clean Innovation Community Solar pilot to provide very transparent benefits to a
13 high number of customers that meet the criteria for LMI. It also helps limit the costs to
14 implement and administer the pilot by making use of existing resources to verify and
15 serve LMI customers.

16 **Q. Please explain the changes in group host responsibilities the Company proposes for
17 the pilot.**

18 A. As discussed previously, the Company anticipates that the administrative requirements
19 for a group host to recruit members and manage their participation can be an impediment
20 for large numbers of LMI customers to be served by group net metering. The Company
21 proposes to reverse that potential preference by making it very easy for a group of EAP
22 customers to be identified. Facilities that participate in the pilot will be able to receive

1 net compensation for surplus generation comparable to what they could earn as a group
2 host, but with none of the major responsibilities involved in obtaining and maintaining
3 registration as a group host. The Company will largely assume all those responsibilities
4 by:

5 (1) Identifying EAP customers in a community selected by the host

6 (2) Providing bill credits to those EAP customers based on the surplus generation of
7 the facility and a Clean Innovation Community Solar generation adjustment (the
8 “generation adjustment”) identified by the host

9 (3) Providing an initial and annual report to the Commission that contains all relevant
10 information required pursuant to Puc 909.09 and 909.10 for projects that
11 participate in the pilot.

12 The responsibilities of facilities participating in the pilot will largely only be to identify
13 zip codes in which EAP customers should receive credit from the facility and agree to
14 provide a generation adjustment.

15 **Q. What is the Clean Innovation Community Solar generation adjustment?**

16 A. The generation adjustment is an amount per kWh that will be deducted from the default
17 service rate to determine payment for surplus generation to the host. For example, if the
18 applicable default service rate were 10 cents per kWh in a billing cycle and the
19 generation adjustment were 1 cent per kWh, the Company would provide payment to the
20 host for surplus generation during that billing cycle at 9 cents per kWh (10 minus 1).
21 The application of the generation adjustment is intended to produce a payment for surplus
22 generation that replicates the net revenues a group host would receive after it shared

1 proceeds from the distribution company for surplus generation with group members. The
2 generation adjustment will be identified by participating hosts in their application for the
3 Clean Innovation Community Solar pilot and will remain fixed for the duration of their
4 participation in the pilot.

5 **Q. How else will the generation adjustment be applied?**

6 A. The generation adjustment will also be used to calculate a Clean Innovation Community
7 Solar customer credit (the “customer credit”) provided to EAP customers enrolled in the
8 pilot.

9 **Q. Please describe the Clean Innovation Community Solar customer credit and how it**
10 **will be calculated?**

11 A. The customer credit will be a dollar amount credited on the bills of EAP customers in
12 communities identified by the host and will be calculated as shown in Exhibit CICS-1. It
13 will be based upon the generation adjustment for a solar facility and its surplus
14 generation. The customer credit is the mechanism by which EAP customers will be able
15 to share in the benefits of solar generation as required by the Commission for the LMI
16 pilot. The customer credit will be calculated by multiplying surplus generation by the
17 generation adjustment and dividing that total by the number of bills to be issued to EAP
18 customers each billing cycle in the communities served by a solar facility.

19 **Q. Are there any requirements for EAP customers that receive the customer credit?**

20 A. No. An EAP customer will receive the customer credit if they reside in a community
21 identified by a participating host customer. The only action necessary to receive the
22 customer credit is to complete the process to enroll in EAP. The Company will not

1 assess any charges to EAP customers in connection with their participation in the
2 program and the host customer or any other entity will be prohibited from seeking
3 payments from participating EAP customers. The elimination of administrative and
4 financial obligations for LMI customers is a critical element of the Clean Innovation
5 Community Solar program design that's intended to mitigate current barriers to LMI
6 participation and protect consumers against adverse financial arrangements. As
7 discussed later, the Company will seek to further engage participating customers through
8 targeted workshops intended to educate customers about solar energy as well as advise
9 them on opportunities to further reduce energy costs through energy efficiency and
10 conservation measures. These workshops are an important element of the overall
11 program design but are not proposed to be a requirement for customer to receive the
12 customer credit.

13 **Q. Are any other changes to the credit for surplus generation proposed for the Clean**
14 **Innovation Community Solar pilot?**

15 A. Yes. The Company proposes that payments for surplus generation to host customers
16 include any amounts which are authorized to be provided to low-moderate income
17 community solar projects pursuant to RSA 362-A:9, XIV(c). SB 165 directs that such
18 facilities be provided an additional 3 cents per kWh from July 1, 2019 through July 1,
19 2021 and an additional 2.5 cents per kWh thereafter. The Company anticipates that the
20 removal of administrative barriers and the competitive selection of participants in the
21 Clean Innovation Community Solar pilot will encourage the largest possible portion of

1 additional ratepayer funded compensation associated with changes to RSA 362-A:9,
2 XIV(c) being directed to the intended LMI beneficiaries.

3 **Q. Will facilities that participate in the Clean Innovation Community Solar pilot be**
4 **low-moderate income community solar projects?**

5 A. The Company believes so. A portion of credit for all surplus generation will be provided
6 exclusively to a high number of residential customers enrolled in EAP in the form of a
7 direct customer credit. The Company finds this to be consistent with the definition of
8 low-moderate income community solar contained in RSA 362-F:2,X(a).

9 **Q. What size facilities are proposed to be eligible to participate in the pilot?**

10 A. The Company proposes that new solar facilities with total peak generating capacity of
11 more than 100 kW and less than 5.0 MW be eligible to participate. Projects up to 5.0
12 MW are proposed to be eligible for the pilot even though the maximum size limit for net
13 metered facilities is 1.0 MW.

14 **Q. Why is the Company proposing to permit projects up to 5.0 MW to participate in**
15 **the pilot?**

16 A. The Company finds the pilot to be a good opportunity to explore the ability of larger
17 distributed generation facilities to achieve lower costs through economies of scale and, as
18 a result, share a greater portion of compensation with customers. Solar facilities greater
19 than 1.0 MW participate in net metering and other solar programs in other jurisdictions
20 and are typically able to provide the benefits of zero-emission electricity generation at
21 lower cost per kWh than smaller solar facilities. The Company does not propose to
22 reduce the total compensation for surplus generation below the default service rate for

1 facilities greater than 1.0 MW, but it's possible such facilities could provide larger
2 generation adjustments and produce greater benefits for EAP customers as compared to
3 smaller facilities. The expansion of the capacity limit to 5.0 MW may also encourage the
4 participation of projects that provide other advantages and benefits, including those that
5 may be sited on brownfield, landfill or other locations that represent a beneficial use of
6 property.

7 **Q. How long does the Company propose to conduct the pilot for?**

8 A. Selected participants will be eligible to receive payment for surplus generation pursuant
9 to the proposed mechanism for a term of 10 years from the start of commercial operation
10 of participating facilities. EAP customers will receive the customer credit or a
11 comparable benefit for the same 10-year term. However, other pilot activity will
12 conclude within a shorter time period. All participants will be selected and enrolled in
13 the pilot soon after Commission approval pursuant to the selection process described
14 below and the Company proposes to conduct most evaluation activity soon after
15 participating facilities have been placed in service.

16 **III. PARTICIPANT SELECTION**

17 **Q. How does the Company propose to select participants for the pilot?**

18 A. The Company proposes to select solar facilities to participate in the pilot through a
19 competitive request for proposal ("RFP") process in order to maximize benefits for EAP
20 customers and provide the opportunity to learn more from the pilot. A model RFP the
21 Company proposes to issue to select projects is provided as Exhibit CICS-3. As discussed
22 in more detail later, solar facilities will be selected to participate in the Clean Innovation

1 Community Solar pilot primarily based upon the generation adjustment they propose to
2 provide for the benefit of EAP customers.

3 **Q. What are the eligibility requirements for applicants to participate in the pilot?**

4 A. Detailed eligibility requirements are contained in the model RFP. In general, the
5 Company will seek applications for certain sized solar facilities located within its service
6 territory that have completed basic project milestones such as obtaining site control and
7 submitting an interconnection pre-application, and which are able to complete
8 construction within 18 months of being selected for the pilot. Eligible projects may also
9 consume no more than 20 percent of projected output onsite. This will promote selection
10 of facilities that produce ample surplus generation that creates benefits to be shared with
11 EAP customers.

12 **Q. What information will be required from applicants to participate in the pilot?**

13 A. Detailed proposal requirements are contained in the model RFP. The Company expects
14 applicants will provide a complete proposal that includes detailed technical, commercial,
15 financial and organizational information on the project. The information provided by
16 applicants is expected to promote and support selection of projects that have a high
17 likelihood of completion as well as provide information that will be relevant to the
18 overall evaluation of the pilot program. Applicants will also be required to identify the
19 generation credit for the facility that will be fixed for the duration of the pilot and the zip
20 code(s) in which EAP customers should be provided a customer credit connected with the
21 facility.

1 **Q. How will applications for the pilot be evaluated?**

2 A. The Company proposes to retain an independent evaluation consultant (the “project
3 evaluation consultant”) to evaluate, score and select proposals for pilot participation
4 based on the criteria presented in the RFP. Participants will primarily be selected based
5 upon the benefits that the proposal will share with EAP customers through the pilot.
6 Projects that demonstrate a high degree of community partnership and engagement, and
7 which provide other verified benefits to community partners will also be favored. Lastly,
8 the technical and commercial feasibility of proposals will be evaluated.

9 **Q. How will EAP customer benefits from a proposal be evaluated?**

10 A. The mechanism by which benefits will be shared with EAP customers through the Clean
11 Innovation Community Solar pilot allows the EAP benefits from a proposal to be
12 evaluated and scored with a high level of objectivity and transparency. The total amount
13 of benefit produced for EAP customers will be directly linked to the amount of the
14 generation adjustment proposed by an applicant as well as the amount of surplus
15 generation to which the generation adjustment will be applied. As a result, proposals will
16 be ranked by the amount per kWh proposed as a fixed generation adjustment, with a pro-
17 ration adjustment applied based upon the ratio of surplus generation expected from a
18 solar facility.

19 **Q. Please explain how the EAP benefit from a proposal will be calculated and scored?**

20 A. For each proposal, the project evaluation consultant will be directed to calculate a pro-
21 rated generation adjustment per kWh by first identifying the generation adjustment
22 contained in each proposal. The project evaluation consultant will then pro-rate that

1 generation adjustment by the proportion of total output from a solar facility that is
2 expected to be surplus generation. For example, a proposal that contains a generation
3 adjustment of 1 cent per kWh and is expected to consume 20 percent of generation output
4 onsite will be scored based upon a pro-rated generation adjustment of 0.8 cents per kWh
5 (1.0 cent per kWh multiplied by 80 percent surplus generation ratio). A facility that does
6 not have any onsite consumption other than parasitic or station load will not have its
7 generation adjustment pro-rated.

8 **Q. Are there other evaluations of proposed EAP benefits that will be conducted?**

9 A. Yes. An objective of the pilot is to provide meaningful bill credits to as large a number of
10 EAP customers as possible. The Company does not want to encourage projects that will
11 provide very low bill credits that are less likely to have a meaningful impact for EAP
12 customers. It also does not want to encourage projects that concentrate benefits among a
13 smaller number of customers and substantially offset the bills of those customers with
14 higher customer credits. While the savings realized by customers that participate in net
15 metering vary and are not always known, the Company has found that typical monthly
16 savings realized in other LMI programs is in the range of \$60.00 - \$250.00 per year, or
17 1.0 to 3.0 cents per kWh for a typical residential customer. Accordingly, proposals that
18 are projected to provide an average monthly bill credit of less than \$5.00 per bill or more
19 than \$20.00 per bill will be rejected. Applicants will be able to assess the customer credit
20 that their proposal will provide based upon projected surplus generation, the proposed
21 generation adjustment and the number of EAP customers in zip codes identified in their
22 proposal. The Company will include a summary of the number of EAP customers by zip

1 code with the RFP for applicants to estimate the customer credit for their proposal.
2 Proposals that provide projected customer credits outside the targeted range of \$5.00 -
3 \$20.00 per bill will not be rejected without the applicant first being notified and provided
4 an opportunity to modify their proposal. The Company may also explore options for the
5 EAP customer group served by the project to be adjusted in order to provide the targeted
6 customer credit.

7 **Q. Will the projected surplus generation from the host be required to exceed the**
8 **projected usage of EAP customers in the community identified by the Host?**

9 A. No. The Company expects that annual consumption of EAP customers in identified
10 communities will approach or exceed the surplus generation of the associated host in
11 most cases but does not propose to include such a requirement for eligibility in the Clean
12 Innovation Community Solar pilot. The Company finds that the proposed limits on
13 customer credits appropriately encourages the sharing of benefits from participating solar
14 facilities and provides greater flexibility for projects to be structured in a variety of ways
15 to benefit LMI customers. The Company does not want to prohibit the selection of a
16 project that may only be able to support a small generation adjustment but can still
17 provide meaningful customer credits to a high volume of EAP customers if the
18 consumption of those customers is less than projected surplus generation from the
19 facility.

20 **Q. Can multiple facilities provide a customer credit to the same customers?**

21 A. Yes. The Company may select multiple proposals that benefit EAP customers in the same
22 zip code. However, the total customer credits from all proposals may not exceed \$20.00

1 per bill. The Company will provide an opportunity for applicants that submit multiple
2 proposals for the same community to modify their applications if the \$20.00 per bill
3 threshold is projected to be exceeded. However, if competing proposals for the same
4 community are submitted by different applicants the highest scoring proposal will be
5 selected.

6 **Q. How will proposed community partnerships and benefits be evaluated?**

7 A. The Company expects that the success of shared solar projects in the Clean Innovation
8 Community Solar pilot and the growth of LMI solar participation in general will be
9 enhanced through the active participation of municipalities and other community
10 partners. The participation of other stakeholders in a shared solar project provides
11 several potential advantages. Community partners may directly support a project by
12 providing land or buildings on which to locate a solar facility. They may provide
13 financial support to a project through ownership, lease or purchase agreements. Active
14 municipal engagement may also encourage successful resolution of siting, permitting and
15 property tax considerations that are often essential to development of shared solar
16 facilities. Municipalities and community partners are also likely to share an interest in
17 serving the LMI population that will benefit from the Clean Innovation Community Solar
18 pilot. The inclusion of municipalities and non-profits in the LMI pilots was also
19 encouraged by other stakeholders during the Commission-led working group process.
20 For these reasons, the Company finds it appropriate to promote projects that have active
21 community participation, and which provide additional benefits to community partners.
22 Eligible projects will be required to identify expected municipal benefits in their proposal

1 and include a thorough description of the community partner participation and benefits
2 that are expected from the project. The project evaluation consultant will be directed to
3 qualitatively assess the municipal and community partner benefits anticipated from each
4 proposal and score proposals based on the completeness and quality of those elements of
5 the proposal.

6 **Q. How will the technical and commercial feasibility of proposals be evaluated?**

7 A. The technical and commercial feasibility of proposals will be evaluated based upon a
8 review of technical specifications presented in the proposal as well as the project model
9 and timeline presented in the proposal. The project evaluation consultant will be directed
10 to qualitatively assess proposals based upon the completeness and reasonableness of
11 these elements of each proposal.

12 **Q. Please describe the role and responsibilities of the project evaluation consultant?**

13 A. The Company expects that the project selection process will benefit from the service of a
14 qualified consultant to review and score all proposals. The project evaluation consultant
15 will provide incremental resources to thoroughly review each proposal and ensure that
16 the evaluation process is conducted by personnel with appropriate expertise. The
17 participation of a project evaluation consultant will also promote confidence that the
18 evaluation process was rigorous, fair and objective, and that the strongest proposals were
19 selected. The project evaluation consultant will be selected through a competitive
20 solicitation prior to issuance of an RFP to select pilot participants and will be expected to:

- 21 (1) Review the model RFP and proposed timeline for proposal submission and
22 evaluation.

1 (2) Recommend limited changes to the model RFP and proposed timeline that may
2 improve project selection without altering the fundamental criteria by which
3 projects will be evaluated and scored.

4 (3) Prepare and/or review responses to written inquiries received from prospective
5 applicants following release of the RFP

6 (4) Review, score and rank proposals submitted in response to RFP

7 (5) Recommend proposals to be selected for participation in the pilot

8 (6) Prepare a report that summarizes the RFP process, the evaluation of proposals,
9 and recommended selections.

10 The Company will complete final selection of pilot participants based on
11 recommendations from the project evaluation consultant and will provide an
12 informational filing to the Commission that identifies selected participants and includes
13 the report prepared by the project evaluation consultant.

14 **Q. How many solar facilities does the Company propose to select for the pilot?**

15 A. The Company does not propose to select a specific number of facilities. Instead, the
16 Company proposes to select facilities that total up to 20 MW of peak generation capacity
17 for the pilot. Selection of up to 20 MW is appropriate for several reasons. The proposed
18 size of the program increases the likelihood that a variety of projects will participate;
19 ensures that the program will benefit a high volume of EAP customers across several
20 communities; and enhances the value of fixed investments necessary to implement the
21 program.

1 The proposed program size of 20 MW and the proposed maximum project size of 5 MW
2 provides the opportunity for at least 4 unique projects serving 4 communities to
3 participate in the pilot, but the number of participating projects and communities could be
4 higher. The Company expects that the information obtained as result of the pilot will be
5 enhanced by the inclusion of multiple participants. Each participant may structure their
6 project differently and partner with different organizations. Creating an opportunity to
7 evaluate the advantages and disadvantages of multiple approaches increases the
8 informational value of conducting the pilot. Enabling the participation of a higher
9 volume of projects also prevents any benefits from the pilot from being concentrated
10 within a single community. The costs to conduct the pilot will be recovered from all the
11 Company's customers, so the Company finds it appropriate to provide the opportunity for
12 a larger number of EAP customers to benefit across several communities within the
13 Company's service territory. The Company expects that a 20 MW program could
14 support customer credits for as many as 4,000 EAP customers or nearly 20 percent of all
15 current EAP customers. This would ensure that EAP customers in many communities
16 benefit from the program.

17 The Company also recommends a 20 MW program due to the fixed costs that will be
18 required to implement the proposed sharing mechanism and customer credit. As
19 discussed later, the Company will make up front investments to modify billing systems to
20 launch the pilot and these costs are largely independent of the number of participating
21 facilities and total capacity of the program. The proposed size of the program will
22 improve the potential cost effectiveness of the pilot by enhancing the potential benefits
23 that those investments will support.

1 **Q. Does the Company propose to select all pilot participants through a single RFP?**

2 A. No. The Company proposes to select participants through two RFPs seeking
3 approximately 10 MW each. The second RFP is proposed to be issued within 9-12
4 months of completion of the first RFP. Dividing project selection between two RFPs is
5 expected to provide opportunities for a larger number of projects to apply for the
6 program. This will encourage selection of the most competitive projects that provide the
7 greatest benefit to EAP customers and community partners and may help later projects
8 learn from the work of earlier projects to refine and improve their proposals.

9 **IV. PROGRAM ADMINISTRATION**

10 **Q. Please summarize the activities that will be administered by the Company to**
11 **implement the Clean Innovation Community Solar pilot?**

12 A. The Company proposes to administer the pilot pursuant to a proposed supplement to its
13 Electric Delivery tariff presented in Exhibit CICS-6. In addition to the project selection
14 process described above, the Company will administer several activities as part of the
15 Clean Innovation Community Solar pilot. The Company will calculate, process and
16 provide customer credits on the bills of EAP customers enrolled in the pilot; educate and
17 engage customers through program communications; and seek to further engage and
18 benefit customers through targeted energy efficiency education.

19 **Q. How will the company provide credits on the bills of EAP customers enrolled in the**
20 **pilot?**

21 A. The customer credit can be provided on the bills of EAP customers with reasonable
22 system modification and administrative support because those customers are already

1 identifiable through C2. All customers are billed by service plans comprised of the rate
2 at which customers are billed along with a customer profile that includes any additional
3 customer billing components such as the EAP discount and supplier delegations. For the
4 Clean Innovation Community Solar Pilot, Eversource expects to replicate a credit
5 allocation process it plans to develop to automate an On-Bill Credit mechanism as part of
6 the Massachusetts SMART program. The Company will review customer profiles and
7 qualify them for the pilot if they are 1.) Receiving the EAP discount; and 2.) Are within a
8 specific zip code. Once customer profiles have been identified through these factors, their
9 respective share of credit from the host facility will be calculated and automatically
10 allocated equally to each EAP customer within C2. The credit will appear as a new line
11 item on the monthly billing statement for the term of a year. Customers will
12 automatically be renewed if they meet the above requirements at the beginning of each
13 year for the length of the pilot.

14 The calculation of the total customer credit to be allocated will be performed as part of
15 the process to calculate and provide payments to host customers for surplus generation.
16 This process is in place today, but the pilot will meaningfully increase the volume of
17 large net metering facilities to which the Company provides payment. The metering of
18 large customer-generators over 100 kW requires that payments and corresponding total
19 customer credit for a facility be calculated largely through a manual process outside of
20 C2. As discussed later, the administrative costs of processing a higher volume of large
21 distributed generation facilities are meaningful, but they would also result from any
22 increase in the number of such facilities whether as result of the pilot or other programs
23 and policies that encouraged the development of large distributed generation facilities.

1 **Q. Will the Company modify or restructure the processing or presentation of the**
2 **customer credit during the pilot?**

3 A. The Company proposes to provide the customer credit during the full 10-year term of
4 participation by the solar facility that produces the credit. There are no current plans to
5 modify the processing or presentment of the credit. However, it is possible that future
6 billing system capabilities could enable more efficient processes and the Company may
7 propose modifications that are consistent with system changes in the future.

8 **Q. How will the Company educate and engage customers enrolled in the Clean**
9 **Innovation Community Solar pilot?**

10 A. The Company proposed to use multiple communications channels to ensure that eligible
11 EAP customers are aware of the credit they will receive on their bills, and that
12 communities are engaged in the Clean Innovation Community Solar Program. The
13 current plan for education and outreach is as follows:

- 14 • Once winning projects are selected, a news release will be issued to all major print
15 and broadcast media outlets in New Hampshire.
- 16 • The month before the program starts, a letter from Eversource will be sent directly
17 to each EAP customer who will be receiving a bill credit. The letter will explain the
18 reasons for the credit, when it will begin, its duration, and reference future
19 communications they will receive inviting them to informational energy efficiency
20 workshops to help them further lower their electric bills.
- 21 • The month before the program begins, we will communicate our outreach plans to
22 NH Community Action Plan administrators directly, so they are aware of which

1 EAP customers will be receiving credits, when they we will occur, and explain the
2 Company's communication plan for those customers.

3 • A special bill insert will be included with the first bill customers receive which
4 includes the credit. The insert will again explain what the credit it is and describe
5 the program.

6 • In addition to the bill insert, a line-item that appropriately describes the credit will
7 be added to participating EAP customer bills throughout the duration of the
8 program.

9 **Q. How will the Company further engage customers through targeted energy efficiency**
10 **education?**

11 A. The Company proposes to offer energy savings workshops to EAP customers who are
12 receiving bill credits through the Clean Innovation Community Solar program. These
13 workshops will be modeled after the successful ButtonUp Workshops that are currently
14 offered in communities around the state through energy efficiency programs. The
15 efficiency workshops for the Clean Innovation Community Solar participants will be
16 tailored to the particular customer group and provide education and tips on how they can
17 further reduce energy use in their homes through conservation behaviors. The Company
18 expects that the proposed workshops will enhance the value of the Clean Innovation
19 Community Solar pilot by complementing the customer credit to further enhance energy
20 affordability for EAP customers in participating communities.

1 **Q. Does the Company provide other energy efficiency support to EAP customers?**

2 A. Yes, The Home Energy Assistance (HEA) Program does offer full no-cost weatherization
3 services to income eligible customers in New Hampshire. If a customer is qualified for
4 EAP they are also qualified for HEA. The HEA Program is run in partnership with the
5 NH CAA's and the federal Weatherization program. It is a statewide program with a
6 limited budget amount and typically serves just over 1,000 customers per year.
7 Depending on the area of the state, many CAA's have existing waiting lists of eligible
8 customers who are waiting for weatherization services. We plan to run the HEA program
9 utilizing the existing budgets and framework for serving customers across the state with
10 the CAA's. It is very likely that some, but not all, EAP customers that are also part of the
11 Clean Innovation Community Solar pilot have already been served or will be served
12 during the Clean Innovation Community Solar timeframe.

13 **Q. Will the workshops provide any other benefits to the Clean Innovation Community**
14 **Solar program?**

15 A. Yes, the workshops will provide an in-person opportunity for engagement with the EAP
16 customers that are part of the Clean Innovation Community Solar pilot. Workshops can
17 provide them with knowledge about the solar project and the bill credits they are
18 receiving, a chance to engage with other participants as part of a community that is
19 interested in energy issues and a chance to learn more holistically about energy use, from
20 the solar production to ways to conserve in the household.

1 **Q. How will you determine the effectiveness of the energy efficiency workshops?**

2 A. The third-party evaluation for the Clean Innovation Community Solar program will
3 include evaluation of the workshop component, including participation in the workshops
4 and whether participants undertook any additional energy efficiency activities or actions.

5 **V. EVALUATION, MEASUREMENT AND VERIFICATION (EM&V)**

6 **Q. Has the Company developed an EM&V plan for the Clean Innovation Community**
7 **Solar pilot?**

8 A. Yes. The Company selected Navigant Consulting as an EM&V consultant for the Clean
9 Innovation Community Solar pilot and worked with them to develop an EM&V plan
10 which is provided as Exhibit CICS-4

11 **Q. What are the objectives of the Company's EM&V plan for the pilot?**

12 A. The evaluation of the Clean Innovation Community Solar pilot is planned to assess the
13 extent to which the program structure reduced financial and administrative barriers to
14 LMI participation; the effectiveness of the pilot in engaging and benefiting LMI
15 customers and participating communities; the incremental costs and benefits of the pilot
16 structure relative to other DG compensation frameworks; and the scalability of the pilot
17 structure. The Company does not intend to assess the costs and benefits that would
18 generally apply to distributed solar generation as part of the pilot evaluation. Commission
19 Order No. 26,029 directed that Commission Staff, in collaboration with the parties,
20 develop a scope and timeline for a New Hampshire-specific Value of Distributed Energy
21 Resources ("VDER") study. Commission Order No. 26,221 further directed Staff to
22 engage a consultant to perform a separate locational value of distributed generation

1 (“LVDG”) study pursuant to an approved scope. The Company expects that the proposed
2 VDER and LVDG studies will inform the costs and benefits that apply to distributed
3 generation broadly, and to assess those items as part of the pilot evaluation would be
4 duplicative and create a potential source of confusion.

5 **Q. What are the potential benefits of the Clean Innovation Community Solar**
6 **mechanism the Company proposes to assess?**

7 A. The Company will assess a range of quantitative and qualitative benefits. The proposed
8 structure of the pilot will enable the Company to accurately track the amount of credit
9 provided to EAP customer accounts. Comparison of Clean Innovation Community Solar
10 enrollment and customer credit to default rates and uncollectible expense associated with
11 EAP customer accounts is consequently expected to be feasible. As a result, savings
12 associated with reduced customer arrearages have the potential to emerge as one of the
13 most transparent benefits of the Clean Innovation Community Solar framework and
14 increasing solar participation amongst LMI customers. The Company will also seek to
15 assess any benefits from the pilot structure for participating host customers and project
16 sponsors. The Company anticipates that the Clean Innovation Community Solar
17 mechanism will reduce or eliminate many administrative costs and considerations that
18 can discourage enrollment of LMI customers in shared solar projects, including customer
19 acquisition costs. The Company will assess the effectiveness of the pilot relative to other
20 models in those respects through available data and interviews with pilot participants.
21 Other qualitative assessments will include the effectiveness of the pilot at engaging

1 participants and prompting them to take other actions that reduce energy costs, and the
2 engagement and benefits of community partners.

3 **Q. Has the Company estimated the expected costs and benefits associated with the**
4 **pilot?**

5 A. The Company does not possess sufficient data to complete a comprehensive cost-benefit
6 assessment in advance of the pilot but has generally considered the potential benefits
7 from the proposed pilot. With respect to arrearage and bad debt expense, benefits of over
8 \$7 per participant per year have been found in evaluations of energy efficiency and
9 weatherization programs for low income customers.¹⁴ Realization of similar benefits for
10 up to 4,000 participants in the pilot would produce cost savings in excess of \$250,000
11 over the planned ten-year term of the program. Savings associated with reduced
12 administrative and customer acquisition cost may be more difficult to measure but have
13 the potential to be significant. The Company could not identify estimates of costs
14 specific to LMI community solar, but sales and marketing costs for residential solar are
15 estimated at \$0.30/watt¹⁵. If the cost that could be reduced for LMI community solar
16 were half that amount, the potential benefit from the pilot could approach \$3.0 million for
17 20 MW in potential cost savings for participating projects. The reduction of
18 administrative costs has the dual benefit of improving the financial viability of more solar
19 capacity and creating greater opportunity for benefits to be shared with low-income

¹⁴ Massachusetts Electric and Gas Energy Efficiency Program Administrators, *Massachusetts Technical Reference Manual for Estimating Savings from Energy Efficiency Measures 2019-2021 - Plan Version*, October 2018

¹⁵ Fu, Ran, David Feldman and Robert Margolis *U.S. Solar Photovoltaic System Cost Benchmark: Q1 2018*, National Renewable Energy Laboratory, 2018

1 customers. As described in the EM&V plan, these expected costs and benefits will be
2 further defined and assessed by Navigant.

3 The expected costs of the pilot are discussed later in this testimony. The Company has
4 not determined whether the benefits of the pilot itself are likely to exceed the costs.

5 However, if the pilot provides greater confidence that the potential benefits are
6 achievable then the scaling of the proposed sharing mechanism through future rate design
7 would be likely to be highly cost-effective.

8 **V. ESTIMATED PILOT COSTS AND PROPOSED RECOVERY**

9 **Q. Has the Company estimated costs to launch and administer the Clean Innovation**
10 **Community Solar Pilot?**

11 A. Yes. The estimated costs of the pilot are summarized in Exhibit CICS-5 and include
12 compensation for surplus generation, consultant expenses for project selection and
13 program evaluation, investments in billing system modifications, expenses for customer
14 education and outreach and costs for incremental staff to support implementation and
15 administration of the pilot.

16 **Q. What is the total estimated compensation for surplus generation?**

17 A. Compensation for surplus generation is estimated to be \$38 million over the ten-year
18 term of the program. Compensation for surplus generation is based upon the estimated
19 output of 20 MW of solar generation capacity and the Company's current default energy
20 service rate of 9.985 cents per kWh plus additional compensation for low-income
21 community solar projects authorized by SB 165. Compensation for surplus generation

1 includes \$6.0 million in estimated credit to be transferred to EAP customers through the
2 proposed sharing mechanism.

3 **Q. How does the Company propose to recover the costs of payments for surplus**
4 **generation?**

5 A. The Company proposes to recover payments for surplus generation through the same
6 mechanism that it recovers other net metering credits and payments. At this time net
7 metering credits and payments are treated as energy purchases and recovered through the
8 Company's default energy service charge, so the Company would similarly recover costs
9 associated with surplus generation of pilot participants.

10 **Q. What is the total estimated investment in billing system modifications?**

11 A. The automation of bill credit processing is necessary to support timely and accurate
12 presentment of customer credits to the large EAP customer pool expected to be included
13 in the pilot. The necessary billing modifications require system work as well as extensive
14 requirements development and testing which are resource and time intensive. Such pre
15 and post system change steps are key to a successful implementation. The total cost for
16 all stages of system modification is estimated at \$1.1 million.

17 **Q. Did the Company consider other approaches to providing bill credits that would**
18 **require less costly billing system modifications?**

19 A. Yes. The Company evaluated the feasibility and costs of providing the customer credit
20 by creating a new profile that would be added to a customer service plan to provide a
21 fixed credit that would be calculated and reconciled on an annual basis. The estimated
22 costs for development of a new service plan were less than those of the Company's

1 proposed approach at approximately \$500,000. However, the Company expected that
2 scaling the proposed compensation structure beyond the pilot may be difficult if customer
3 credits required periodic calculations and reconciliations. Furthermore, the Company
4 recognized that the automated bill credit allocation it proposes to develop for the pilot
5 may ultimately be required to support other distributed generation customers. This would
6 be the case if RSA 362-A:9, XIV(c) were modified to permit group hosts to elect to
7 receive credits on the customer electric bill for each member. The Company found its
8 proposed approach to be the most appropriate and cost effective based on the ability to
9 scale the pilot design in the future and the expectation that proposed billing system
10 enhancements may ultimately be required for distributed generation projects not
11 participating in the pilot.

12 **Q. What are the total estimated consultant expenses?**

13 A. Total consultant expenses are estimated to be \$300,000 for project selection and program
14 evaluation. The Company has already selected Navigant Consulting for program EM&V
15 and anticipates issuing a request for proposals for a project evaluation consultant upon
16 Commission approval of the pilot. The project evaluation consultant will support both
17 RFPs the Company anticipates issuing to select pilot participants. The Company's
18 estimated consultant costs are based upon its experience obtaining services from similar
19 consultants with capabilities that will be required to successfully support the pilot.

1 **Q. What are the total estimated expenses for customer education and outreach?**

2 A. The total costs for customer education and outreach are estimated to total less than
3 \$40,000. Estimated costs include expenses for printing, postage and bill inserts, as well as
4 costs associated with the proposed workshops.

5 **Q. What are the total estimated expenses for incremental staff to support**
6 **implementation and administration?**

7 A. The Company expects that running a successful pilot will require additional staff for
8 program administration and billing activities. The payroll, benefit and/or contract expense
9 for that staff is estimated to total \$250,000 per year and increase annually with inflation.
10 The Company anticipates hiring a program manager to administer and/or coordinate all
11 phases of the pilot including participant selection, billing system modification, customer
12 communications & outreach, payments to host customers and credits to EAP customers.
13 The hiring of one full time equivalent (FTE) billing staff member is expected to support
14 manual payment processing for the increased number of large net metering facilities
15 supported by the Company and the periodic enrollment and removal EAP customers from
16 the program based on changes in EAP status

17 **Q. Why can't the Company support the pilot with existing staff?**

18 A. The Company's experience has been that expansion of net metering and distributed
19 generation results in unique and incremental activities on top of work already being
20 performed by existing resources. The success of the pilot and positive experience of
21 customers that participate in it requires the attention of a dedicated program manager, and
22 the issuance of timely and accurate payments to host customers requires additional billing

1 staff to support that activity. Existing Company personnel already have other
2 responsibilities that would prevent them from providing the necessary attention to the
3 incremental activities associated with the proposed Clean Innovation Community Solar
4 pilot.

5 **Q. How does the Company propose to demonstrate costs are associated with**
6 **incremental personnel?**

7 A. From an overall perspective, all employees hired to support the pilot and payment
8 processing for new solar facilities and bill credit recipients are *incremental* because, from
9 a business perspective, the Company would not be filling these positions *but for* the
10 growth in solar generation and the creation of new bill crediting mechanisms.
11 Incremental programs are important to the advancement of policy objectives, and the
12 functions are new. This means that the costs are not recovered by base distribution rates
13 set in the past on a historical test year basis. Labor-related costs for the program would
14 not be incurred if the Company were not involved in its implementation. The Company
15 will demonstrate that the costs are incremental by establishing a separate line of business
16 and unique work orders within its accounting systems to track all costs associated with
17 the pilot, including labor costs. The Company will also issue new position requisitions to
18 fill necessary roles. Those requisitions will include position descriptions that clearly
19 identify the responsibilities of the position and their connection to the proposed pilot.

1 **Q. How does the Company propose to recover costs associated with billing system**
2 **modifications, consultants, customer education and outreach, and incremental staff?**

3 A. The Commission has directed that utilities should have the opportunity to recover
4 prudently-incurred costs of development and implementation of all approved pilot
5 programs that are required pursuant to Order No. 26,029. The costs described above are
6 estimated to total \$5.0 million over the ten-year term of the pilot. The costs are a direct
7 result of the proposed pilot and appropriate for recovery. The Company proposes to
8 recover prudently-incurred costs resulting from pilot development and implementation
9 through the Distribution Rate Adjustment Mechanism (“DRAM”) proposed in its pending
10 base distribution rate case.

11 **V. CONCLUSION**

12 **Q. Please summarize the Company’s proposal for the Clean Innovation Community**
13 **Solar LMI pilot?**

14 A. The Company is pleased to propose a community solar model that may overcome
15 existing financial and administrative barriers to LMI customer participation in solar
16 programs. It’s important that the growth of clean energy in New Hampshire benefit all
17 communities and customers and the Company is encouraged to have received, as shown
18 in Exhibit CICS-7, support for the pilot from several organizations that actively serve the
19 needs of the state’s most economically vulnerable residents. The Company requests that
20 the Commission authorize it to conduct the Clean Innovation Community Solar pilot as
21 described in this testimony. The proposed pilot has the opportunity to demonstrate the
22 effectiveness of a new mechanism for sharing the benefits of solar with LMI customers

1 whose circumstances do not allow them to participate in a net metered project. The
2 Company has carefully considered the barriers to LMI participation in net metering and
3 other shared solar frameworks and sought to directly eliminate or mitigate those barriers
4 through its proposed program design. The Company will appropriately evaluate the
5 benefits of the pilot and finds that the proposed sharing mechanism has the potential to be
6 cost effective. Lastly, the prudently-incurred costs associated with development and
7 implementation of the pilot are proposed to be appropriately recovered by the Company.

8 **Q. Does this conclude your testimony?**

9 **A. Yes. It does.**