

Chairman and members of the committee,

I am writing on behalf of the 3500 members of Northern Plains Resource Council who are farmers and ranchers, as well as urban dwellers. Our goal in terms of renewable energy is to remove any barriers for all Montanans to use distributed, clean, renewable energy.

The members of Northern Plains Resource Council strongly support enabling community solar in Montana for a number of reasons:

First, it is undeniable that there are **economies of scale** achieved with larger projects, such as a 100 kW community solar array, that reduce the cost per watt for all participants. If we can make renewable energy less expensive while maintaining customer choice, it's in the best interest of all utility customers that we do so.

Secondly, **community solar is a way for investor owned utilities and rural electric cooperatives to offer distributed renewable energy to their customers**, in a way that is most beneficial for the utility or cooperative. The utility can have a say in system siting, and identify locations on their system that are best suited for distributed renewable energy and will strengthen the reliability of the grid.

It is easier for utilities to read and dispatch the output from a larger solar array or wind turbine, than it is when there are many single, small renewable energy installations across the system behind the meters. Community solar and wind is a way to make distributed renewable energy work for utilities and cooperatives—a fact that is evident by the wide adoption of community solar by co-ops and utilities in many states including Iowa, Colorado, and Minnesota.

Further, enabling community solar will make distributed renewable energy accessible to all Montanans, even low income customers and renters. During the last legislative session, there were some concerns expressed that net metering is only for the wealthy. While we maintain that the drastic decline in cost of renewable energy makes that concern increasingly unnecessary, it is true that the net metering policy currently excludes **renters** who don't own their rooftop, **multi-family housing and condos** which may have multiple households under the same roof, **shaded properties**, as well as **low-income customers** who can't afford the cost of a full installation. With community solar or wind, any utility customer could buy a portion of a larger shared system, at whatever level they can afford.

This creates a great economic development strategy for local communities. Every rooftop becomes a potential energy generator, with lease payments going to schools, civic centers, or farmers. And of course, this would allow our many renewable energy installation businesses in the state to grow and enable more electricians to begin working in the field.

Community solar and wind systems, both utility- and customer-owned, would truly make renewable energy accessible to all Montanans, which we feel should be a goal of this committee. We want to emphasize that we believe a community renewable energy policy must include allowing private developers to initiate community solar installations for a utility's customers, with the utility's input on inter-connection and possibly siting. Beartooth Electric Cooperative passed such a policy earlier in 2016 in collaboration with a local solar installer and project development is now underway. Beartooth Electric felt that this was the best policy option for them at this time, [because they were not financially able to fund systems and are also unwilling to take on the risk and management of the projects.](#)

I want to clarify that we see this discussion of community solar as separate from the committee's ongoing discussion of the net metering policy and rate. Community solar is simply another way to offer distributed renewable energy choices to Montanans, and in no way should it replace the ability of customers to install their own net-metered systems, or by purchasing an ownership interest in a community system. We continue to advocate for removal of unnecessary restrictions on customer-owned systems, and for realistic accounting for the benefits and costs to the utility system.

What we would ask from the committee is that you request that your staff create a brief report on community solar policy models for Investor Owned Utilities, including customer-owned community solar, and that you take a closer look at the topic at your July meeting.

Thank you.

Submitted by Mary Fitzpatrick, Billings

Northern Plains Resource Council, Clean Energy Task

May 13, 2016

MEMBER RELATIONS POLICY 419

1. SUBJECT: INTERCONNECTION OF COMMUNITY RESIDENTIAL and COMMERCIAL CUSTOMER GENERATION RESOURCES (250KW Limit)
2. OBJECTIVE: Beartooth Electric Cooperative, Inc. (BEC) recognizes that their commercial and residential members may want to take advantage of community generation resources. This policy outlines the means and requirements for interconnection of this generation with Beartooth Electric Cooperative's distribution lines.
3. POLICY:
 - 3.1. AVAILABILITY AND REQUIREMENTS
 - 3.1.1. When five (5) or more commercial or residential members desire to interconnect to BEC's grid a signed community interconnection agreement outlining specific terms and conditions with BEC is required.
 - 3.2. COMMUNITY GENERATION PROGRAM
 - 3.2.1. Net Metering is defined as the interconnection of member-generation from a distributive source to BEC facilities, in which the generation output of energy not used at the source is netted against the energy delivered by BEC within the following guidelines:
 - 3.2.1.1. Community generation is intended to offset part or all of the participating members' own electrical requirements at their service with a single production meter located at a central site (community generation).
 - 3.2.1.2. Costs associated with interconnecting or administering net metering systems are the responsibility of the members/generators.
 - 3.2.1.3. Charges for energy delivered by BEC in excess of the energy flowed back onto the system by the community generator shall be billed on a monthly basis at BEC's applicable standard commercial or residential service rate schedule for each member.
 - 3.2.1.4. Net electricity produced or consumed during the billing period shall be measured, in accordance with normal metering practices.
 - 3.2.1.5. Price and Payment: At the end of each yearly billing period, if the energy supplied by members to BEC is more than the energy supplied by BEC, members shall be credited (at the avoided cost) for the net energy with the kilowatt-hour credit appearing on subsequent bills.



Community Interconnection Agreement Net Metering Service (250KW)

This agreement dated this _____ day of, 20 __, by and between Beartooth Electric Cooperative, Inc. (BEC), and _____, (Members).

Whereas Members own or intend to install and own an Electric Community Generating Facility (Facility) qualifying for Community Net Metering Service as allowed in BEC's current rules, regulations and policies. Prior to installing the community project the plans, specifications and location of the community generation will be reviewed and approved by BEC's engineering team.

Location:

And, whereas Members wish to sell and BEC is willing to purchase energy produced by the Facility; the parties agree:

- 1) **Community Generating Facility:** Members' Facility shall consist of a Community Generating Facility. Said Facility will be interconnected and operated in parallel with BEC's distribution facilities, and is intended to offset part or all of Members' electrical requirements measured by BEC at a single metered facility located at the immediate interconnection point. Billing for community generation will be on a subscribed basis (no dual metering required). All subscribers will share in the energy production of the project and any annual costs associated with the project as dictated by their subscription contract.
- 2) **Term:** This agreement shall commence when signed by both BEC and five or more Members and continue on a month-to-month basis until such time that there is no longer a power purchase agreement between the Facility and the Members.
- 3) **Definition of Terms:**
 - a) **Net Energy:** Is the difference between electricity supplied through the electric grid to Members and electricity generated by the Community Generating Facility and fed back to the electric grid over the applicable billing period.

- b) **Members:** Is synonymous with Members/Generators and means users of a net metering system.
 - c) **Avoided Costs:** Means the wholesale energy component of BEC's current applicable rate.
 - d) **Qualifying Facility:** Means Members' equipment beyond the meter that meets the criteria for service under the Community Generation Policy (BEC Policy MR 419).
- 4) **Measurement of Net Energy:** A meter or meters shall be installed to measure the flow of energy, at the expense of Members. The Members shall be responsible for all other expenses involved in purchasing and installing facilities necessary for the meter installation.
- 5) **Price and Payment:** If the energy supplied by Members to BEC is greater than the energy supplied by BEC to the Members, the energy difference shall show as "banked usage" on the subsequent bill(s). At the end of each yearly billing period, the remaining "banked usage" shall be credited to the BEC Members' account at the avoided cost. The Members facility site will be charged the applicable base fee and energy charges.
- 6) **Interconnection:** Members shall provide, at their sole expense, the interconnection on community generation side of the meter. At Members' expense, BEC shall make reasonable modifications to BEC's system necessary to accommodate Members' Facilities. The cost for such modifications is \$_____, due in advance of construction. The net metering system used by BEC shall include, at Members' expense, all equipment necessary to meet applicable safety, power quality and interconnection requirements established by BEC's electric service requirements, the National Electric Code, National Electrical Safety Code, the Institute of Electrical and Electronics Engineers and Underwriters Laboratories.
- BEC's written approval of Members' protection-isolation method to ensure the community generator disconnection in case of a power interruption from BEC is required before service is provided under this schedule.
- 7) **Disconnect Switch:** Members shall furnish and install on Members' side of the meter a safety disconnect switch that shall be capable of fully disconnecting the Members' community energy generating equipment from BEC's electric system. The disconnect switch shall be located adjacent to the meter and shall be a visible break type in a metal enclosure which can be secured. The disconnect switch shall be accessible to BEC personnel at all times. BEC shall have the right to disconnect the Facility from BEC's supply at the disconnect switch when necessary to maintain safe electrical operating conditions or the Facility at any time adversely affects BEC's operation of its electrical system or the quality of BEC's service to other members.
- 8) **Functional Standards:** Members shall furnish, install, operate and maintain in good order and repair, all without cost to BEC, all equipment required for the safe operation of the Community Facility in parallel with BEC's system. This equipment shall include, but not be limited to equipment necessary to establish automatically and maintain synchronism with BEC's electric supply and a load break switching device that shall automatically disconnect the unit from BEC's supply in the event of overload or outage of BEC's supply. The Facility shall be designed to operate within allowable voltage variations of BEC's system. The Facility shall not cause any

adverse effects upon the quality of service to BEC's non-generating members.

- 9) **Installation and Maintenance:** Except for metering equipment owned by BEC, all equipment on Members' side of the point of delivery, including any required disconnect switch and synchronizing equipment, shall be provided, installed and maintained in satisfactory operating condition by Members, and shall remain the property and responsibility of the Members. BEC shall bear no liability for Members' equipment or for consequences of its operation or failure to operate properly. For purposes of gathering research data, BEC may at its expense install and operate additional metering and data-gathering devices.
- 10) **Pre-operation Inspection:** Prior to interconnection, the Facility and associated interconnection equipment shall be inspected and approved by the state electrical inspector and any other governmental authority having jurisdiction.
- 11) **Access:** Authorized BEC employees shall have the right to enter the Members' property for the purpose of operating the disconnect switch and meters and making additional tests concerning the operation and accuracy of its meters.
- 12) **Indemnity:** Members agree to indemnify and hold BEC harmless from any and all liability for any and all damages, including attorneys' fees and cost, the Members caused by the operation of the Facility.
- 13) **Enforcement upon default by Members:** BEC shall have the right to specifically enforce the terms of this agreement and collect reasonable attorney fees and costs associated thereto.
- 14) **Merger:** This contract contains the entire agreement between the Members and BEC and may not be changed except by written agreement signed by all parties.

In witness whereof, Beartooth Electric Cooperative, Inc. and Members have, by their duly authorized representatives, executed this agreement in duplicate as of the day and year first above written.

Members:

By: _____
Title: _____
Date: _____

Beartooth Electric Cooperative, Inc.:

By: _____
Title: _____
Date: _____

By: _____

Title: _____

Date: _____

By: _____

Title: _____

Date: _____

By: _____

Title: _____

Date: _____

Quick Reference Guide

**Shared Renewable Energy for Low- to Moderate-Income Consumers:
Policy Guidelines and Model Provisions**

As more Americans gain access to affordable renewable energy, and as more “shared” and “community” solar programs crop up across the country, states and other stakeholders are asking the question: **How can we bring shared renewable energy opportunities to our low and moderate income (LMI) residents?**

IREC’s *Shared Renewable Energy for Low- to Moderate-Income Consumers: Policy Guidelines and Model Provisions* provides information and tools for policymakers, regulators, utilities, shared renewable energy developers, program administrators and others to support the adoption and implementation of shared renewables programs specifically designed to provide tangible benefits to LMI customers.

The guidelines and accompanying model provisions are intended to function in tandem with IREC’s existing *Model Rules for Shared Renewable Energy Programs*, which have helped guide and inform numerous state and utility shared renewable energy programs to date.

This Quick Reference Guide provides a summary of the key components of the guidelines and model provisions, along with references to the relevant sections and page numbers within the main report.

Identifying LMI Customers and Designing Facilities to Serve LMI Customers

Identifying LMI Customers

- IREC uses “low- to moderate-income” or “LMI” throughout the guidelines, however different terminology (e.g., affordable housing, disadvantaged, underserved, minority and frontline communities, and communities of color) may be more appropriate depending on the focus of a particular program.
- If income-based criteria are used, it is important to note that low-income and moderate-income customers have different circumstances. Different program design approaches may be necessary to more effectively reach the range of customers within the LMI category.

IREC Recommendations and Model Provisions	Quick Reference Guide
<ul style="list-style-type: none"> ✓ Include “moderate-income” earners (120% of Area Median Income (AMI)), as well as “low-income” customers (80% of AMI). ✓ Incorporate socioeconomic and environmental factors into LMI eligibility to allow for flexibility in program design, depending on a particular program’s goals and target customers. 	<ul style="list-style-type: none"> ✓ <i>Guidelines Section I.A (p. 5-6)</i> ✓ <i>Model Provisions Section I. Definitions:</i> <ul style="list-style-type: none"> ○ <i>Section I.h (p. 36)</i> ○ <i>Section I.i (p. 36)</i> ○ <i>Section I.j (p. 36)</i> ○ <i>Section I.m (p. 37)</i>

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Designing Facilities to Serve LMI Customers

- It is necessary to define what constitutes a shared renewables facility intended to serve LMI customers (an “LMI facility”), especially because the customer composition in a facility directly affects facility financing.
- The higher the LMI participation rate in an LMI facility, the greater the need for incentives and other financing tools to ensure program success due to the financial barriers faced by LMI customers.
- Facilities focused on serving LMI customers may need to rely on another customer or group of customers to serve as “anchor” participants in a facility, who can serve to mitigate some of the credit and other financial issues faced by LMI customers.
- Program and policy goals and metrics for LMI customer participation rates should be as specific as possible to help garner buy-in from all involved stakeholders, including LMI advocates, project developers, lenders, utilities, and program administrators, as well as determine the appropriate level of incentives and/or financial tools needed to achieve the goals set forth.

IREC Recommendations and Model Provisions	Quick Reference Guide
<ul style="list-style-type: none"> ✓ Specify that the majority of the LMI Facility should be comprised of LMI participants (at least 60% LMI participation). This recommended ratio of LMI to non-LMI customer participation is intended to ensure that the facility is dedicated to serving and benefiting a meaningful number of LMI customers. ✓ Adjust the LMI percentage on a program-by-program basis, depending on available incentives, financing tools and mechanisms, and other specific circumstances. The viability of a 60% LMI facility is inextricably tied to financing issues. 	<ul style="list-style-type: none"> ✓ <i>Guidelines Section I.B</i> (p. 6-10) ✓ <i>Model Provisions:</i> <ul style="list-style-type: none"> ○ <i>Section I. Definitions:</i> <ul style="list-style-type: none"> ▪ <i>Section I.d</i> (p. 35) ▪ <i>Section I.t</i> (p. 37) ○ <i>Section IV. Additional Financing Considerations</i> (p. 40-41)

Addressing LMI Participation Barriers and Opportunities through Targeted Program Design

Financial Barriers

- Financial barriers to LMI participation in shared renewable energy facilities include: **lack of access to the capital or sufficient credit; competing critical economic priorities; lack of tax appetite; and participation in discounted electricity rate assistance programs.**
- In addition to directly offsetting costs for participants or providing access to credit, the availability of financing tools and mechanisms may lower costs for LMI facilities such that facilities could decrease the subscription price or offer discounted subscriptions to LMI participants.
- Financing and incentive options include:
 - Those targeting LMI participants, such as direct incentives, loan programs, and credit enhancements, alternative and hybrid underwriting criteria; and
 - Those targeting LMI facilities and LMI participant organizations, such as anchor subscribers, back-up guarantees, direct incentives, tax incentives, loan programs, credit enhancements, and low-cost public financing.
- Financing mechanisms may require new funding sources or a reallocation of existing funding streams. Financing tools should aim to address LMI barriers and support programmatic goals.

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Financial Barriers continued

IREC Recommendations and Model Provisions	Quick Reference Guide
<ul style="list-style-type: none"> ✓ Implement at least one financing tool or mechanism to facilitate LMI participation. The Model Provisions are not prescriptive on which mechanism(s) should be used. ✓ Balance the availability of these tools and mechanisms with other program design parameters, including in particular the eligibility criteria for an LMI facility. ✓ Address the <i>minimum participation term for LMI customers</i> and the <i>valuation of bill credits</i>. These are key program design components that impact the financial proposition of participation in a program. ✓ Specify that an LMI participant owns the Renewable Energy Credits (RECs) associated with the electricity allocated to the LMI participant's subscription, unless otherwise specified through separate transaction. 	<ul style="list-style-type: none"> ✓ <i>Guidelines:</i> <ul style="list-style-type: none"> ○ <i>Sections II.A (p. 11-14)</i> ○ <i>Sections III.A (p. 21-29)</i> ○ <i>Sections III.B (p. 30-34)</i> ✓ <i>Model Provisions:</i> <ul style="list-style-type: none"> ○ <i>Section III. Bill Credit (p. 40)</i> ○ <i>Section IV. Add'l Financing Considerations (p. 40)</i> ✓ <i>Appendix – CleanCARE Proposal (p. 44)</i> ✓ <i>Case Studies:</i> <ul style="list-style-type: none"> ○ <i>New York Green Bank (p. 20)</i> ○ <i>NY SUN Affordable Solar (p. 31)</i> ○ <i>California's Multifamily Solar Programs (p. 22-24)</i> ○ <i>Massachusetts Solar Loan Program (p. 26)</i> ○ <i>Grand Valley Power and GRID Alternatives Low-income Community Solar Projects (p. 28)</i> ✓ <i>IREC's <u>Shared Renewable Energy Program Model Rules</u> (for a more detailed discussion of bill credit valuation)</i>

Ownership Barriers and Split Incentives

- Many LMI customers live in rentals, affordable housing, and/or multifamily housing. Although shared renewable energy programs can help to address some split-incentive barriers for these LMI customers, especially if shared facilities can be located off-site, certain other barriers remain.
- Participation may require cooperation by a landlord or the entity responsible for the master meter; split incentives may exist between renters and landlords, in terms of motivation to participate and allocation of direct benefits on electricity bill.
- Affordable housing may impose additional restrictions and policy challenges related to how energy savings can be translated to beneficial impacts on tenants' rents or utility allowances.
- Higher rates of mobility among LMI customers may require additional flexibility in program design, including options to transfer or assign subscriptions as well as adjusting the meter or account to which benefits are allocated.

IREC Recommendations and Model Provisions	Quick Reference Guide
<ul style="list-style-type: none"> ✓ Allow an LMI facility to be hosted on-site or located off-site, as a stand-alone facility. ✓ Allow master-metered multitenant buildings to participate but require that the beneficial impact for tenants must be demonstrated, whether direct (e.g., tenant bill or other cost savings) or indirect (e.g., overall building savings translated to tenant savings and/or improved tenant services). ✓ Educate customers about efficiency and other retrofitting opportunities available to LMI customers. Taking advantage of these opportunities may lower the ultimate subscription need and associated cost. ✓ Allow subscriptions in an LMI facility to be transferred or assigned. ✓ Allow participants to change the individual meters or accounts to which the LMI facility's electricity generation is attributed for that participant. ✓ Take into account split incentives and other related barriers that may be outside the scope of shared renewables program design. 	<ul style="list-style-type: none"> ✓ <i>Guidelines Section II.B (p. 14)</i> ✓ <i>Model Provisions:</i> <ul style="list-style-type: none"> ○ <i>Section I. Definitions:</i> <ul style="list-style-type: none"> ▪ <i>Section I.d (p. 35-36)</i> ▪ <i>Section I.j (p. 36)</i> ▪ <i>Section I.k (p. 37)</i> ▪ <i>Section I.l (p. 37)</i> ▪ <i>Section I.t (p. 37)</i> ○ <i>Section V. Marketing, Education & Outreach</i> <ul style="list-style-type: none"> ▪ <i>Section V.c (p. 41)</i>

Marketing, Education, and Outreach Barriers

- Identified marketing, education, and outreach (ME&O) barriers that may prevent LMI customers from being aware of and/or understanding shared renewables programmatic and financing options include: **language barriers; lack of Internet access; constraints on resources and time; consumer skepticism; unclear or complicated eligibility criteria; and difficulty demonstrating eligibility.**
- Customers will need to be appropriately educated regarding eligibility criteria, and obtaining and retaining eligibility should be made as easy as possible. In some cases, it may make sense to tie eligibility to an existing program, such as a state or federal assistance program.
- All marketing and education materials should be designed with the needs and priorities of LMI customers in mind to effectively speak to and reach the LMI target audience.

IREC Recommendations and Model Provisions	Quick Reference Guide
<ul style="list-style-type: none"> ✓ Ensure that LMI customer ME&O materials are culturally and linguistically appropriate. ✓ Educate customers regarding eligibility criteria. ✓ Once eligibility is established, do not require LMI participants to prove eligibility on an ongoing basis, unless the customer renews or signs a new contract. ✓ Require an LMI participant organization to contract with a partner organization to administer ME&O for LMI customers, if not a partner organization itself. ✓ Require, wherever possible, that existing materials and/or outlets targeting LMI customers be leveraged to minimize program costs and avoid customer confusion. ✓ Specify appropriate consumer protection requirements for LMI customers participating in LMI facilities. These requirements should balance the protection of LMI customers with maintaining program cost-effectiveness. 	<ul style="list-style-type: none"> ✓ Guidelines: <ul style="list-style-type: none"> ○ <i>Section II.C</i> (p. 15) ○ <i>Section II.D</i> (p. 16) ✓ Model Provisions <i>Section V. Marketing, Education & Outreach</i> (p. 41-42)

Opportunities for Engagement

- LMI customers and their communities have many characteristics that make them excellent partners in cultivating community action, including social capital (e.g., strong social networks), interest in civic engagement, community- and faith-based volunteerism, and the capacity to create innovative solutions to ensure that a shared renewables program meets their needs.
- Public-private partnerships focused on engaging, educating, and conducting targeted outreach to LMI customers regarding shared renewable energy programs can be highly effective and can help ensure long-term program success.
- With dedicated grants and funding sources, organizations already serving LMI communities may be well suited to assist with identifying strategies for engagement and recruitment, to host community workshops or trainings, and/or to advise on effective marketing and communications.

IREC Recommendations and Model Provisions	Quick Reference Guide
<ul style="list-style-type: none"> ✓ Require an LMI participant organization to contract with a partner organization to administer ME&O for LMI customers, if not a partner organization itself. 	<ul style="list-style-type: none"> ✓ Guidelines <i>Section II.D</i> (p. 16) ✓ Case Studies: <i>Grand Valley Power and GRID Alternatives Low-income Community Solar Projects</i> (p. 28) ✓ Model Provisions <i>Section V. Marketing, Education & Outreach</i> (p. 41-42)