Vermont Group Net Metering Information & Guidelines

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2. Executive Summary

Vermont is a *national leader* in the concept and application of net metering. There are now over 1,300 small renewable power systems that have been approved for net metering within the State. Although a total of 40 states have legislatively implemented net metering, the specific policies are wide ranging. Many states limit the maximum capacity to less than 50 kW, or limit the annual output as a percentage of the individual's consumption.[1] Vermont also imposes limitations on net meter projects, but, to encourage additional renewable energy generation, Vermont expanded the concept to include "group net metering."

Group net metering allows individual accounts holders within one utility service territory to form a group, to construct and operate a renewable power project, and to distribute net metering credits to individual participants. This is advantageous to all parties—it helps to minimize interconnection agreements, brings economy of scale to project pricing, and allows individuals who do not have optimal sites to fund their own renewable generation project.

In order to help Vermonters embark on the group net metering journey, Vermont's Clean Energy Development Fund (CEDF) and Powersmith Farm supported the creation of this document. The CEDF funds utilized were through a US Department of Energy program supported by the ***American Recovery and Reinvestment Act of 2009***. This document provides information and guidelines to those interested in starting or joining group net metering projects. It will begin with a history and review of Vermont regulations and requirements that promote the ability of multiple customers within one electric utility service territory to join together in ownership of a central renewable power generation system of up to 250 kW.

This document then reviews an example project—Community-Owned Renewable Energy (CORE) and includes an example of a membership agreement. The document also includes an economic *pro forma* that provides sample financial information for a CORE project.

This document also reviews possible legal structures and outlines the pros and cons of the group net metering approach. Some initial issues are liquidity of ownership (what it takes to purchase, sell, or transfer your share), appetite for certain tax incentives, operation, maintenance, and administrative responsibilities, and resolution of billing and credit disputes.

Group net metering is an opportunity to engage those who are willing to invest in a self-generated renewable power project, but who do not have an optimal site, the knowledge to access tax incentives, or the individual funds to secure an advantageous price for the system. By aggregating these individuals as participants in a larger project—a ***Community-Owned Renewable Energy project***—Vermont has a substantial

[1] Database of State Incentives for Renewables & Efficiency, *Net-Metering*, http://www.dsireusa.org/solar/solarpolicyguide/?id=17

tool to expand its renewable power generation capacity to the benefit all Vermonters. Each project will produce local jobs for installers & electricians, the power generated means more dollars stay in the community, and the ongoing CORE relationship brings communities together around the common purpose of clean generation of electricity.

IMPORTANT NOTE:
In the Vermont House of Representatives session of 2011, a revision of the Group Net Metering legislation – within House Bill Number 56, has been put forward. If approved this will substantially change certain aspects of how Group Net Metering is accomplished. Pertinent revisions include the following:

1. ***The maximum project size will increase from 250 KW to 500 KW.***

2. ***The Certificate of Public Good will need to be utilized within 12 months of issuance, or will become invalid.***

3. ***The Electric Company will calculate and apply a "monetary" credit for power produced by the Group Net Metered system, rather a direct kWh credit.***

4. ***The Group will direct the Electric Company as to the manner and amounts for allocation of credits to Group members. The Electric Company becomes responsible for the billing & crediting of the Group members, instead of depending on the Group managing an aggregate bill.***

3. Background of Net Metering

In 1998, the Vermont Legislature authorized net metering, which allows customers to generate renewable energy and feed it into the electric grid. Within each billing cycle, the customer's utility company subtracts the amount of energy that the customer produces from the energy that the customer uses, for a reduced "net metered" bill.

Originally, the legislation limited net metering to a maximum capacity of 15kW or 150 kW for farm methane generation. In 2006, the rules were modified to include small hydro generation. The rules also included a requirement that Vermont utilities accept net metered generation up to 1% of peak demand.

To encourage additional renewable energy generation, the Vermont Legislature established additional rules, including allowing *group net metering*. These rules were most recently amended in 2009. Group net metering allows individual electric account holders within a single utility service territory to band together to construct and operate a community scale renewable power project, and distribute the net metering credits to participants. Presently, the legislation limits the max capacity of a net metered system to 250 kW, and Vermont utilities are required to accept net metered generation up to 2% of peak demand (at their option to accept beyond that level).

Group net metering brings economy of scale to renewable energy projects, allows individuals who do not have optimum sites to engage in the process of generating their own power, and helps minimize interconnection agreements.

The group as a whole receives a single, itemized bill from the local electric utility, and they decide how to divide the generation credits amongst one another. Although group net metering provides many incentives, setting up a group can be complicated—especially as the group becomes larger or adds and removes members. This document intends to provide general guidance for groups wishing to initiate a project.

Several states other than Vermont allow group net metering, and several successful groups have formed around the country—most notably, the Ellensburg, Washington Community Solar project spearheaded by Gary Nysted. The Ellensburg facility (which includes both solar and wind generation) currently serves members in Ellensburg's utility district with a max capacity of around 50 kW.[2] The Ellensburg project is slightly different from options available in Vermont, because the local public utility district manages the Ellensburg group and facility. In that sense, the group functions like a municipal electric utility. The benefit of that structure is that a pre-existing agency can address all administrative matters. Vermont net metering groups, on the other

[2] For detailed information, see http://nwcommunityenergy.org/solar/solar-case-studies/chelan-pud

hand, must address their own administrative tasks (or engage the professional services of a firm or individual with expertise in group net metering management).

To officially set up a net metering group in Vermont, the members must successfully apply for a Certificate of Public Good (CPG) from Vermont's Public Service Board (PSB). The PSB granted the first CPG for a net metering group in 2009, and has since granted approximately 20 additional group net metering CPGs. As of the end of 2010, most group net metered projects are single utility customers with multiple meters; however, some groups contain multiple customers.

When forming a group, valuable information—beyond this document—may be found in the structure and plans of previously established groups. There are many ways to successfully set up a group and the structure most fitting in one circumstance may not be most fitting in another. By perusing the information from other groups, emerging groups may find additional appealing options. The PSB orders, available for viewing on their website,[3] provide general information about the structure, but also indicate where and by whom the group was set up.

As mentioned previously, several Vermonters and electricity customers around the country have taken advantage of group net metering; however, the process of establishing a group is not without challenges. This document attempts to address most of the foreseeable complications to make the process as simple as possible.

[3] Vermont Public Service Board, http://www.state.vt.us/psb/

4. Group Net Metering Regulations Overview

As stated in the Vermont Statute that currently defines and regulates Group Net Metering (30 V.S.A. § 219a. *Self-generation and net metering*), those seeking to establish a GROUP NET METERING system must fulfill the following requirements:

- *System Size:* group net metering systems may have a generation capacity of no more than 250 kW.
- *Facility Site:* The renewable energy production facility must be sited within the same utility service area as all of the net-metering group's members.
- *Participants:* group net metering systems may include members with any metered facility within the same utility service area. Participating member facilities do not necessarily need to be located on contiguous property.
- *Certificate of Public Good:* group net metering systems require a certificate of public good, issued by the Public Service Board. (see Appendix A)
- *Interconnection:* A group net metering system is responsible for funding its grid interconnection.
- *Group Administrator:* group net metering systems must have a dedicated point of contact, responsible for managing communications between the group and their utility or the Public Service Board or the Department of Public Service.
- *Bill Management:* Rather than issue individual bills to group net metering participants, the utility will issue a single bill, which includes an account of kilowatt-hour credits produced as well as electricity usage by all system participants over the same time period. Group net metering systems are responsible for managing the allocation of energy production credits among the members. The group administrator is also responsible for collection of the members' individual payments and the group's aggregate payment to the utility.
- *Conflict Resolution System:* group net metering systems must establish a conflict resolution protocol for resolving conflicts between system participants that does not rely on the servicing utility, the Public Service Board or the Department of Public Service.
- *Insurance*: groups are required to carry $100,000 of liability insurance for residential sites or $300,000 for non-residential.

5. Group Net Metering Issues

A variety of issues were addressed in the original group net metering legislation, and additional issues that the legislation either did not address, or that have been insufficiently addressed until now, were identified through the research carried out by this project. They are listed and briefly explained below.

The uptake of group net metering by Vermonters has been slow, suggesting the persistence of obstacles of an administrative, legal, public awareness, attitudinal, or other non-technical nature.

Benefits of Group Net Metering

- **Distributed generation** of electricity is encouraged, potentially leading to a more robust, resilient statewide energy infrastructure.

- **Economies of scale** are encouraged, since it is less expensive per unit of power generated to build and operate larger energy production systems.

- The broad application of **best available technology** is encouraged (e.g., smart meters, last-mile distribution infrastructure).

- Given a trend toward distributed, small-scale net-metered generation, group net metering reduces the potential **number of interconnection points** for such systems.

- Optimization of sites: collaboration among a group with diverse access to land and buildings can lead to **optimal placement** of solar and wind installations, maximizing the use of the available resources.

- The development of community-scale renewable energy solutions is encouraged, with the **technical robustness** not available to smaller single-household/single-business energy systems, and the extension of financial benefits among wider segments of communities, including people who do not own appropriate sites or possess much investment capital for renewable energy investment, supporting greater **social equity.**

- There is a need to make group net metering opportunities available to groups consisting of members who do not own **contiguous** properties, and may not even own the properties at which they pay for electricity.

- The interest is served of achieving **broad-based social and environmental benefits** (i.e., stimulating the increased use of climate-friendly, non-fossil energy sources; keeping dollars in the local economy; stimulating local jobs and technical expertise).

Potential Group Net Metering Issues

- Consumers must perceive the **legal and financial aspects** of group net metering as clear, simple, and attractive.

- **Aggregate billing policies** (i.e., for a net-metered group) must be clarified for situations where members of the group are billed at different rates, such as general service rate for residential rate-payers vs. time-of-day rates for other rate-payers.

- The **legal and financial risks** posed by partial ownership of an energy-producing capital asset must be clear, manageable, and insurable for small investors. Such risks include, but are not limited to:
  - Technical failure
  - Business failure, bankruptcy
  - Lawsuits among group net metering system members
  - Lawsuits relating to public nuisances
  - Natural disasters
  - Theft, sabotage, vandalism

- The **viability and cost-effectiveness of interconnection** for the utility must be maximized; this is achieved by locating generation sites on land owned by municipalities or community organizations that tends to be close to major transmission infrastructure.

- There will always be a potential need among group net metering system members for some members to leave the arrangement and **transfer their shares**, with compensation, to new members who replace them in the group net metering system.

- The opportunity must be facilitated for small, non-incorporated groups of local rate-payers/investors to **access state and federal grants and tax credit incentives** for investment in renewable energy generation (e.g., the Federal Renewable Investment Tax Credit (ITC), Modified Accelerated Cost-Recovery System (MACRS) depreciation) that they would otherwise not be eligible for. These can significantly reduce the capital cost of the project for the owners.

- It may also be possible to structure a group net metering arrangement so that entities with **significant tax appetites** can gain access to financial losses generated through application of MACRS which small investors/ group net metering members cannot make use of.

- The opportunity is created for groups of smaller investors to participate in markets for the **Renewable Energy Certificates** (RECs) demanded in states where legislation requires utilities to purchase them (if they do not invest in expanding their own direct renewable energy generation capacity).

6. Community Scale Project Example

The group net metering legislation provides a great deal of flexibility in the establishment of each system. It has been used by farms, groups of neighbors, and some small businesses. The blueprint that follows is an example of how group net metering can be leveraged by those interested in community-scale renewable energy systems. (also see Appendix B. CORE Net Metering Agreement)

Community Owned Renewable Energy (CORE) Program

While group net metering requires no more than two meters, this report is intended to provide a blueprint for those seeking to establish renewable energy facilities that serve the broadest number of potential participants. Specifically, the CORE program is modeled to fill a gap in Vermont's renewable energy profile: community-scale renewable energy. With few exceptions, there are no programs that fit this profile.

Currently, those interested in pursuing renewable generation electricity may either invest in a privately owned, on site renewable energy facility (e.g. home solar systems) or they may choose to pay a premium for renewable generation electricity provided by their utility on a per kilowatt hour basis (e.g. the Central Vermont Public Service *CowPower* program).

CORE programs would allow any ratepayer, including small businesses, homeowners, and renters, to invest in local renewable energy production, similar to a home solar system, but at a lower entry price point and without many of the limiting factors of privately owned renewable energy systems.

The CORE system is modeled as a 250 kilowatt capacity solar array. The 250 kilowatt size was chosen to maximize its potential to serve Vermont communities with locally owned, locally sited renewable energy production facilities. It is modeled as a photovoltaic system due to the relative technical and financial flexibility of photovoltaics in comparison with other renewable energy sources at this time.

In addition, the 250 kilowatt capacity provides a reasonable balance point between individual community electricity needs and the renewable electricity needs of Vermont as a whole. At this time, utilities are required to support no more than 2% of total energy production through group net metering. By limiting the recommended facility size to 250 kilowatts, this model can be adopted by a number of communities across Vermont without crossing the 2% production capacity threshold.

For Community Benefit

The goal of the CORE model is to increase community member access to locally owned renewable energy systems. A key component of the CORE program is the intentional inclusion of the community (e.g., municipality, land trust, non-profit foundation) itself as an intended beneficiary of the system. This is integrated into the model through the recommendation that CORE groups prioritize sites owned by municipalities or not-for-profit (NFP) entities. In exchange for entering into a lease

with the CORE system, the municipality or NFP entity may be offered a cash payment and/or membership in the group.

Partnering with the town or equivalent offers the entity establishing the CORE system a financial advantage, as well. Preliminary research suggests such potential members' sites are often situated in more densely populated or commercially developed areas, where electric transmission infrastructure such as substations and high-voltage transmission lines are already located.

CORE Program Participation

CORE participation is calculated in production facility memberships. One membership includes rights to a percentage of array production in accordance with the relative size of the project. For example, in a 100 kilowatt array, a one kilowatt membership would be credited with 1% of all electricity generated through the system. Participants who are net energy producers may be financially compensated by net energy consumers within the group for the use of excess kilowatt credits.

The CORE program may include a blend of households and small businesses. It is recommended that the system maintains a membership level such that total annual electricity consumption exceeds total production until such time as the group can be assured cash compensation for net production. The group may choose to identify a high electricity usage business to absorb excess kilowatt hour credits on a monthly basis to avoid carrying credits over multiple months.

Participants may choose to leave the system at any time. They will be reimbursed for their membership at a rate determined by the group. The group administrator will alert the utility to the status change of the exiting participant, at which point the former member will become wholly responsible for their electricity bill.

Group Administrator

The CORE system anticipates a manager or management entity to facilitate the system. This individual or entity will be responsible for:

- Acting as the utility liaison
- Tracking system kilowatt hour production
- Receiving aggregate bills from the utility and determining energy proration
- Distributing net energy bills to group members
- Paying utility bills for group net consumption
- Managing membership flow into and out of the group
- Resolving intergroup conflicts in alignment with conflict resolution protocols
- Maintaining any required legal documents
- Managing financing relationships
- Managing expansion projects
- Supervising infrastructure operations and maintenance

Given the potential complexity of management responsibilities, it is the recommendation of this report that groups that anticipate entering into external financing relationships, including a large number of members, or pursuing expansion projects enter into a management contract with an experienced group management entity. Management would incur fees relative to anticipated complexity.

The CORE system is modeled under a multilateral contract when under 20 participants.

For groups with more than 20 participants, the CORE system may function better as a cooperative.

7. Legal Structure and Requirements

Structure Options

After considering several different models to establish the required relationship between the landowner, members, and the facility's management and operation, set forth below—we advocate the use of a multilateral licensing agreement. A model multilateral licensing agreement is set forth at Appendix B.

There are many formation options available depending on the circumstances a particular CORE group faces. The first, and most important, is the status of the land where the facility will be sited. For instance, if the land is being donated for the purpose of a CORE project, the CORE participants can consider creating a trust to hold the land and assets, with defined units being controlled by each member who would also be appointed as a trustee. However, our assumption is that land will be held by an individual or municipality who will lease the land for an agreed term in exchange for offset utility bills.

Additionally, we assume that the project will be more financially feasible if CORE participants can take advantage of the tax benefits associated with purchasing renewable solar generation. For this reason, most incorporation models (such as the cooperatives, limited liability corporations, low-profit limited liability corporations, C Corporations and S Corporations and limited partnerships) were considered but dismissed. Incorporation models, although providing limited liability, are largely inflexible in preserving tax benefits for multiple parties. The parties would be required to execute a complicated, delayed conveyance of their assets to the corporation at a later date, since incorporating and purchasing the facility through the incorporation would disqualify the purchase from individual incentives and require that the entity have a tax appetite to satisfy any benefit. Therefore, preservation of the tax benefits for multiple parties and not just the direct asset purchaser requires that the facility components be purchased directly by individuals seeking the tax benefit. This cannot be satisfied by incorporation models.

Lastly, the purpose of the model contract was to make the formation of a CORE group an easy, self-executing process. CORE projects should be available to any and all persons who want to participate, regardless of constraints due to costly legal drafting particular to a given situation.

Benefits: Tax

Using a ***Multilateral Licensing Agreement*** (contract between multiple parties) to establish CORE projects allows considerable flexibility. First, it can be designed to benefit either single or multiple tax-advantaged investors who purchase the solar photovoltaic system and receive the investment credit with limited paperwork and headache from the Internal Revenue Service. To use an incorporated entity without engaging in a somewhat complicated conveyance of the facility by CORE members to the new entity some time after purchase, the entity itself would receive the tax benefits. Individual members would not receive the benefits for personal use. The entity could also not use the benefits unless it has an “appetite,” or enough taxes

owed to trigger the tax benefit. This is unlikely to be the case for any entity formed for a CORE purpose. Therefore, the use of an agreement is best to preserve tax incentives.

Benefits: Tailored Administration
A multilateral licensing agreement allows for CORE members to define how they would like their relationship to be governed. We have recommended the use of a single Group Administrator who has the group's authority to pay bills, distribute offsets, and collect membership fees. The Administrator is also responsible for the operation and maintenance of the facility and for handling any correspondence from the utility. This position is elected at the inception of the CORE group, with three year terms subject to no confidence votes.

Benefits: Easier Execution at Lower Cost to Members
Using an Agreement to form the relationship between CORE members provides a streamlined, easier execution. There are no legal costs involved and the process is less opaque than incorporation into a limited liability entity. Furthermore, because the Vermont Public Service Board requires an insurance policy before CPG approval, and the systems owner at their discretion—could increase the amount of coverage, the limited liability benefits of incorporation are not compelling enough to outweigh the ease of using a simple contract in the form of the multilateral licensing agreement.

Multilateral Licensing Agreement Basics

The nature of an Agreement that initiates the project depends largely on the relationship between the parties to the contract. However, in a circumstance like group net metering, where parties may change throughout the life of the project, Members should ensure that they are comfortable with the security of the Agreement.

The first and most important clause of the Agreement should name the parties to the contract. Because the contract creates a relationship between the members, it is important for participants to consider how the members are selected and admitted into the group. For the original founding members of the group, this means also that they must vet one another to ensure reliability.

The next significant portion of the Agreement deals with the Group Administrator. As mentioned previously, the Administrator plays a very important role. The administrator handles all of the group's communications, payment of electric utility bills, management of accounts, etc. Because this may be a time consuming role, the Administrator may wish to hire outside assistance. The group may also decide to structure the contract such that the administrator position is filled by a hired professional; however by electing a group member as the administrator, the group has more control over the process, the administrator has a strong interest in the group's successful operation, and decisions are streamlined. Depending on the size of the group and the group members' familiarity with one another, groups should also consider electing a deputy administrator to act in the administrator's absence.

Another key Member to the project is the landowner who provides the site for installation of the project. A group should select this member carefully for several reasons. First, because the site will greatly impact the operation of the facility; second, because a landowner who moves (such that ownership changes) may impact the success of the group; and third, landowners declaring bankruptcy may have a negative impact on the group. Thus, it is in the Members' best interest to fully evaluate the selection of the landowner and to insure that the landowner has a significant interest in the success of the group.

Significantly, for the founding members of the group (based on the structure of the Agreement provided in Appendix B) all of the founding members should sign the same contract on the same day but may do so on different signature pages, as long as those signature pages are identical. This will be important for tax rebates as well as for the election of the first Group Administrator.

Certificate of Public Good

As mentioned previously, utility customers must successfully apply for a Certificate of Public Good (CPG) from the Public Service Board (PSB) before taking advantage of net metering. Group net metering customers fill out and submit one joint application. Importantly, there are two separate procedures to apply for a CPG depending on the size of the generation facility. If the facility's maximum capacity is less than 150 kW, the process is much simpler than facilities with a capacity between 150 kW and 250 kW.

Facilities less than 150 kW

For facilities with maximum capacities of less than 150 kW, the CPG process involves an application form, which is available for download from the PSB website,[4] and is also included for reference in **Appendix A**. To ensure the most current/accurate application is used, downloading the form directly from the PSB website is strongly encouraged.

Vermont's PSB is a quasi-judicial licensing and regulatory board with authority over public services such as electricity.[5] As the name suggests, the purpose of the CPG application process is to ensure that the project serves the general good of the state. In issuing a certificate, the PSB considers such factors as the utility/reliability of the project, environmental and aesthetic impacts, financial impacts on the state/region, etc.[6] As such, net-metering groups should be conscious of the impacts of their facility—not just on the electric grid, but also environmentally and aesthetically—and address any potential concerns as early as possible. Potential concerns may include, but are not limited to: impact on adjacent wetlands, run-off and rainfall management, impact on adjacent property values, etc.

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[4] *See* Vermont Public Service Board, *Net Metering*, http://psb.vermont.gov/utilityindustries/electric/backgroundinfo/netmetering

[5] *See* Vermont Public Service Board, http://www.state.vt.us/psb/

[6] For more information, see 30 V.S.A. § 248 (2009), *available at* http://www.leg.state.vt.us/statutes/fullsection.cfm?Title=30&Chapter=005&Section=00248

To facilitate prompt and successful processing, the CPG application should include several items:[7]

1. Cover Letter

Though not required, is helpful in outlining the purpose of the project and any concerns that may come up (for example, if the generation facility is located adjacent to a wetland, this should be noted and addressed in the cover letter as well as Section 8 of the application). (See Appendix A for an example)

2. Group Net Metering application form

Section 1: Information about the applicant & landowner. Note that the "applicant" need not be the Group's dedicated point of contact (indicated in Section 7).

Section 2: Information about the installer.

Section 3: Certification Section. This section should be filled out with utmost caution. The group must ensure that all of the pertinent criteria are met.

Section 4, 5 and/or 6: Basic technical information about the system. Recall that the maximum capacity for the total system shall not exceed 250 kW. Note that Note also the notification requirements listed in these sections

Section 7: This section requires the specific information required by statute and Rules and can be completed in the following manner:

a. The meters to be included in the group- example table as below:

	<the Utility> Account #	Physical Address	Member Name
1	12345	## Street	First Last
2	12346	## Street	First Last
3	12347	## Street	First Last
4	12348	## Street	First Last

b. A method for adding and removing meters included in the group:

Meters will be added or removed from the system by application to the <group name> to verify that the system's and the groups requirements are met. After the new member or departing member agrees to the terms of <group name>'s contract and after the administrator approves the addition or removal, and 30 days before the change is to become effective, the administrator will provide notice to <group's utility company>, the department of public service and the public service board.

[7] For reference, refer to Appendix A.

c. A designated person:

Include full name & address.

d. Dispute resolution clause:

"In the event of any dispute, the group members and parties to the group's contract will be bound by the terms of the contract, which include provisions dictating remedies for dispute resolution and limiting any recourse to the public service board, department of public service or utility."

The applicant must also include a map showing the location of the generation system and the group members' properties. This map should be included as an attachment to the application. Most easily, this map should be a satellite image with markers indicating the various sites. For an example of such a map, see Appendix A.

Section 8:
In part (1), if there is a question about whether the facility is "near" one of the listed areas (such as a stream), attach a separate sheet indicating the distance between the stream and the closest construction near the stream. Also include a statement of the group's plan to minimize any impact on the stream (such as runoff or erosion control, both during construction and during use).

In part (2), the group should explain that they considered the visual and aesthetic impact of the generation facility. The group should also explain that how they plan to minimize any negative impact, for example, by planting shrubbery between the facility and an adjacent landowner or the road, or by planting small trees throughout (as long as they do not shade the array).

3. Attachments:

- List of parties notified (per instructions in Sections 4,5,6)
- Satellite image indicating the proposed location of the generation facility, lockable disconnect switch, and the locations of all group members' metered facilities (per instructions in Sections 4,5,6)
    - Would also be helpful to include a CAD drawing indicating the proposed configuration & location of the system.
- Environmental Impact (per instructions in Section 8)
- Visual and Aesthetic Statement (per instructions in Section 8)

Facilities under 250 kW

Groups proposing facilities with generation capacity over 150 kW but under 250 kW must formally petition the PSB for a CPG under 30 V.S.A. § 248. Because of the unique details of every group, it is highly encouraged that groups falling in this category hire a lawyer to complete the petitioning process.

Again, the purpose of the petitioning process is for the PSB to determine if the project will serve the general good of the State. The PSB considers factors ranging from reliability of the system (and the systems impact on grid stability), economic and aesthetic impacts, environmental impact, etc.[8] Petitioners must provide detailed information about the project, include pre-filed testimony, and anticipate a range of questions about the system, site, construction process, etc. The application process also requires the PSB to conduct both nontechnical public and technical evidentiary hearings about the proposed facility unless the PSB determines that the facility will be of limited size and impact.[9]

The petitioner must provide copies of the application to the Attorney General, the department of public service, the department of health, agency of natural resources, historic preservation division, scenery preservation council, state planning office, agency of transportation, the agency of agriculture, food and markets and to the chairperson or director of the municipal and regional planning commissions and the municipal legislative body for each town and city in which the proposed facility will be located.[10] Each of these parties, as well as other interested parties, will have the opportunity to comment on the project and participate in the hearings.

Again, due to the nature and complexity of the petitioning process, legal assistance is highly encouraged.

[8] For more information, *see* 30 V.S.A. § 248 (b), *available at* http://www.leg.state.vt.us/statutes/fullsection.cfm?Title=30&Chapter=005&Section=00248

[9] *See* 30 V.S.A. § 248 (j), *available at* http://www.leg.state.vt.us/statutes/fullsection.cfm?Title=30&Chapter=005&Section=00248

[10] 30 V.S.A. § 248(4)(c), *available at* http://www.leg.state.vt.us/statutes/fullsection.cfm?Title=30&Chapter=005&Section=00248

8. Financial Incentives

Note: One of the most comprehensive and current sources of information regarding incentives for renewable power is from The North Carolina State University Energy Center and their web site ***www.Dsireusa.org***, the "Database of State Incentives for Renewables and Efficiency." Most information on incentives in this guidebook comes directly from the DSIRE reports and other portions have been tailored to groups following the CORE model. The specific web addresses are listed at the end of each section.

Also see **Attachment C**- Economic Pro-Forma that utilizes incentives to help determine financial viability.

Vermont Business Solar Tax Credit

Beginning in 2009, Vermont began offering the "Business Solar Tax Credit" for installations of solar energy equipment on business properties. The credit is equal to 100% of the "Vermont-property portion" of the federal business energy tax credit for solar. In effect, this constituted a 30% state-level credit for systems and equipment that use solar energy to generate electricity.
The full 30% credit expired at the end of 2010, leaving only a credit equal to 24% of the federal business energy tax credit. This is equal to a 7.2% Vermont investment tax credit and stays in effect until 2016.

Any taxpayer who receives funding from Vermont's Clean Energy Development Fund is not eligible to claim the tax credit for the project (for investments made on or after January 1, 2009). Corporate taxpayers who take the Federal Treasury grant in lieu of investment tax credit are not eligible for Vermont's Business Solar Tax Credit.

The Vermont Department of Taxes issued Technical Bulletin 45 (July 2009) with additional guidance, including information about which forms to complete for individual and corporate filers. Corporate filers should use tax for BA-404 available on Vermont Department of Taxes website. **Technical guidance should be available on the Vermont Taxes website when revisions to the code are instituted.**[11]

Vermont Sales Tax Exemption

Vermont's sales tax exemption for renewable-energy systems applies to systems up to 250 kilowatts (kW) in capacity that generate electricity using eligible "renewable energy" resources to micro-combined heat and power (CHP) systems up to 20 kW, and to solar water-heating systems. Vermont's sales tax rate is 6%.[12]

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[11] Information in this section was adapted from the DSIRE website and can be found at:
Database of State Incentives for Renewables and Efficiency, *Vermont: Business Tax Credit for Solar*,
http://www.dsireusa.org/incentives/incentive.cfm?Incentive_Code=VT31F&re=1&ee=1

[12] *See* DSIRE, *Vermont: Renewable Energy Systems Sales Tax Exemption*,
http://www.dsireusa.org/incentives/incentive.cfm?Incentive_Code=VT01F&re=1&ee=1

Vermont Small Scale Renewable Energy Incentive

Vermont's Small Scale Renewable Energy Incentive Program provides funding for new solar electric (photovoltaic) and wind turbines installations that can be part of Group Net Metering systems. **Future funding of this incentive is based on the availability of ARRA grants**. PV incentives ***cannot*** be taken if the **Vermont Business Solar Tax Credit** is also taken. In addition, for entities categorized as "Special" these incentives cannot be taken if the entity has received a Clean Energy Development Fund grant or loan or other ARRA grant for the same project. Incentives are as follows:

Solar Photovoltaic (PV)

Residential PV: $0.75/Watt (W) generating capacity (DC) up to 10 kilowatts (kW). Maximum customer cap is $ 24,000 over 2 years from 2/2010 thru 2/2014.

Commercial PV: $0.75/W DC up to 10 kW, $0.60/W DC for next 15 kW (up to 25 kW), maximum $16,500.

Special Category (government, non-profit, schools, hospitals, low-income multi-family) PV: $2.50/W DC up to 10 kW, $1.50/W DC for next 50 kW (up to 60 kW), and $1.00/W DC for next 90 kW (up to 150 kW), maximum incentive up to 35% of project costs.

In July 2010, 750 kW in capacity had been reserved during this sixth round of funding under the residential and commercial categories, and the PV base incentive levels were reduced from $1.50/W to $1.25/W. In September 2010, the next 750 kW in capacity had been reserved, triggering the second step-down and incentive levels were reduced further from $1.25/W to $1.00/W. In addition, the "Special Category" reservations reached their 250 kW reserved milestone and PV incentive base levels were reduced from $3.00/W to $2.50/W. As of October 2010, no projects above 59.9 kW will be eligible for incentives.[13]

Public Information (RERC)
Renewable Energy Resources Center
255 S. Champlain Street, Suite 7
Web Site: http://www.rerc-vt.org
Burlington, VT 05401

Phone: (877) 888-7372
E-Mail: rerc@veic.org

Green Mountain Power PV Power Incentive:

Green Mountain Power, an investor-owned electric utility operating in Vermont, offers a bonus payment to customers with net-metered photovoltaic (PV) systems. In addition to the benefits of net metering, Green Mountain Power customers with a PV system receive a payment of $0.06 per kilowatt-hour (kWh) of electricity generated by the system. This payment is available to all customers of Green Mountain Power, which serves roughly one-quarter of Vermont's population. The incentive does not have a specified duration or expiration date.

[13] *See* DSIRE, *Vermont Small-Scale Renewable Energy Incentive Program*, http://www.dsireusa.org/incentives/incentive.cfm?Incentive_Code=VT17F&re=1&ee=1

In order to net meter, customers must first apply for and receive a "Net Metering Certificate of Public Good" from the Vermont Public Service Board (PSB). Net metering in Vermont is generally limited to systems up to 250 kilowatts (kW) in capacity. An additional meter must be installed to record each system's output. Green Mountain Power will reimburse customers for up to $300 of the expenses associated with the additional meter. Customers retain ownership of the renewable-energy credits (RECs) associated with the electricity generated by PV systems.[14]

Customer Service – GMP Phone: (888) 835-4672
Green Mountain Power
163 Acorn Lane
Web Site: http://www.greenmountainpower.com
Colchester, VT 05446

Federal Tax- Accelerated Depreciation

Under the federal Modified Accelerated Cost-Recovery System (MACRS), businesses may recover investments in certain property through depreciation deductions. The MACRS establishes a set of class lives for various types of property, ranging from three to 50 years, over which the property may be depreciated. The 5-year schedule for most types of solar and wind property has been in place since 1986.
In December 2010 the provision for bonus depreciation was amended and extended yet again by *The Tax Relief, Unemployment Insurance Reauthorization, and Job Creation Act of 2010 (H.R. 4853)*. Under these amendments, eligible property placed in service after September 8, 2010 and before January 1, 2012 qualifies for 100% first-year bonus depreciation. For 2012, bonus depreciation is still available, but the allowable deduction reverts from 100% to 50% of the eligible basis.

To qualify for bonus depreciation, a project must satisfy these criteria:

- The property must have a recovery period of 20 years or less under normal federal tax depreciation rules;
- The original use of the property must commence with the taxpayer claiming the deduction;
- The property generally must have be acquired during the period from 2008 - 2012; and
- The property must have be placed in service during the period from 2008 - 2012.

If property meets these requirements, the owner is entitled to deduct a significant portion of the adjusted basis of the property during the tax year the property is first placed in service. As noted above, for property acquired and placed in service after September 8, 2010 and before January 1, 2012, the allowable first year deduction is 100% of the adjusted basis. For property placed in service from 2008 - 2012 for which the property placed in service date does not fall within this window, the allowable first-year deduction is 50% of the adjusted basis. In the case of a 50% first year deduction, the remaining 50% of the adjusted basis of the property is depreciated over the ordinary MACRS depreciation schedule. The bonus depreciation rules do not

[14] *See* DSIRE, *Vermont: Green Mountain Power – Solar GMP*, http://www.dsireusa.org/incentives/incentive.cfm?Incentive_Code=VT34F&re=1&ee=1

override the depreciation limit applicable to projects qualifying for the federal business energy tax credit. Before calculating depreciation for such a project, including any bonus depreciation, the adjusted basis of the project must be reduced by one-half of the amount of the energy credit for which the project qualifies.
For more information on the federal MACRS, see *IRS Publication 946, IRS Form 4562: Depreciation and Amortization*, and *Instructions for Form 4562*.[15]

Public Information – IRS
Phone: (800) 829-1040
Web Site: http://www.irs.gov

Federal Tax- Investment Tax Credit (or Grant)

Note: The American Recovery and Reinvestment Act of 2009 allows taxpayers eligible for the business ITC to receive a grant (also known as a 1603 grant) from the U.S. Treasury Department instead of taking the business ITC for new installations. The grant is only available to systems where construction begins prior to December 31, 2011. The Treasury Department issued Notice 2009-52 in June 2009, giving limited guidance on how to take the federal business ITC instead of the federal renewable electricity production tax credit.

The federal business energy investment tax credit available under 26 USC § 48 was expanded significantly by the *Energy Improvement and Extension Act of 2008* (H.R. 1424), enacted in October 2008. This law extended the duration -- by eight years -- of the existing credits for solar energy, fuel cells and micro turbines; increased the credit amount for fuel cells; established new credits for small wind-energy systems, geothermal heat pumps, and combined heat and power (CHP) systems; allowed utilities to use the credits; and allowed taxpayers to take the credit against the alternative minimum tax (AMT), subject to certain limitations. The credit was further expanded by *The American Recovery and Reinvestment Act of 2009*, enacted in February 2009.

In general, credits are available for eligible systems placed in service on or before December 31, 2016:

- **Solar:** The credit is equal to 30% of expenditures, with no maximum credit. Eligible solar energy property includes equipment that uses solar energy to generate electricity, to heat or cool (or provide hot water for use in) a structure, or to provide solar process heat. Hybrid solar lighting systems, which use solar energy to illuminate the inside of a structure using fiber-optic distributed sunlight, are eligible. Passive solar systems and solar pool-heating systems are *not* eligible. (The Solar Energy Industries Association has published a document that provides answers to frequently asked questions regarding the federal tax credits for solar energy.)

[15] *See* DSIRE, *Federal: Modified Accelerated Cost-Recovery Systems (MARCS) + Bonus Depreciation (2008-2012)*, http://www.dsireusa.org/incentives/incentive.cfm?Incentive_Code=US06F&re=1&ee=1

- **Small Wind Turbines:** The credit is equal to 30% of expenditures, with no maximum credit for small wind turbines placed in service after December 31, 2008. Eligible small wind property includes wind turbines up to 100 kW in capacity. (In general, the maximum credit is $4,000 for eligible property placed in service after October 3, 2008, and before January 1, 2009. *The American Recovery and Reinvestment Act of 2009* removed the $4,000 maximum credit limit for small wind turbines.)

- **Combined Heat and Power (CHP):** The credit is equal to 10% of expenditures, with no maximum limit stated. Eligible CHP property generally includes systems up to 50 MW in capacity that exceeds 60% energy efficiency, subject to certain limitations and reductions for large systems. The efficiency requirement does not apply to CHP systems that use biomass for at least 90% of the system's energy source, but the credit may be reduced for less-efficient systems. This credit applies to eligible property placed in service after October 3, 2008.

In general, the original use of the equipment must begin with the taxpayer, or the system must be constructed by the taxpayer. The equipment must also meet any performance and quality standards in effect at the time the equipment is acquired. The energy property must be operational in the year in which the credit is first taken.

The American Recovery and Reinvestment Act of 2009 repealed a previous restriction on the use of the credit for eligible projects also supported by "subsidized energy financing." For projects placed in service after December 31, 2008, this limitation no longer applies. Businesses that receive other incentives are advised to consult with a tax professional regarding how to calculate this federal tax credit.[16]

** The American Recovery and Reinvestment Act of 2009, which allows PTC-eligible facilities to use the 30% ITC, has implications for some technologies that were already potentially eligible for either incentive in some form. Certain geothermal and open- or closed- loop biomass systems (including biomass CHP projects) now qualify for a 30% tax credit through December 31, 2013, the in-service deadline for these technologies under the PTC. Wind-energy systems of all sizes -- not only systems of 100 kW or less -- also now qualify for the 30% ITC through the wind-energy PTC in-service deadline of December 31, 2012. Applicants should refer to the eligibility definition contained in the PTC to determine if and how their project might qualify for this treatment.*

Public Information – IRS
Phone: (800) 829-1040
Web Site: http://www.irs.gov

USDA- Rural Energy for America Program (REAP)

The Food, Conservation, and Energy Act of 2008 enacted by Congress in May 2008, converted the federal Renewable Energy Systems and Energy Efficiency Improvements Program,* into the Rural Energy for America Program (REAP). Similar to its

[16] *See* DSIRE, *Federal: Business Energy Investment Tax Credit (ITC)*, http://www.dsireusa.org/incentives/incentive.cfm?Incentive_Code=US02F

predecessor, the REAP promotes energy efficiency and renewable energy for agricultural producers and rural small businesses through the use of (1) grants and loan guarantees for energy efficiency improvements and renewable energy systems, and (2) grants for energy audits and renewable energy development assistance. Congress has allocated funding for the new program in the following amounts: $55 million for FY 2009, $60 million for FY 2010, $70 million for FY 2011, and $70 million for FY 2012. REAP is administered by the U.S. Department of Agriculture (USDA). In addition to these mandatory funding levels, there may also be discretionary funding issued each year.

Of the total REAP funding available, approximately 88% is dedicated to competitive grants and loan guarantees for energy efficiency improvements and renewable energy systems. These incentives are available to agricultural producers and rural small businesses to purchase renewable energy systems (including systems that may be used to produce and sell electricity) and to make energy efficiency improvements. Funding is also available to conduct relevant feasibility studies, with approximately 2% of total funding being available for feasibility studies. Eligible renewable energy projects include wind, solar, biomass and geothermal; and hydrogen derived from biomass or water using wind, solar or geothermal energy sources. These grants are limited to 25% of a proposed project's cost, and a loan guarantee may not exceed $25 million. The combined amount of a grant and loan guarantee may not exceed 75% of the project's cost. In general, a minimum of 20% of the funds available for these incentives will be dedicated to grants of $20,000 or less. The USDA likely will announce the availability of funding for this component of REAP through a Notice of Funds Availability (NOFA).

The USDA will also make competitive grants to eligible entities to provide assistance to agricultural producers and rural small businesses "to become more energy efficient" and "to use renewable energy technologies and resources." These grants are generally available to state government entities, local governments, tribal governments, land-grant colleges and universities, rural electric cooperatives and public power entities, and other entities, as determined by the USDA. These grants may be used for conducting and promoting energy audits; and for providing recommendations and information related to energy efficiency and renewable energy. Of the total REAP funding available; approximately 9% is dedicated to competitive grants for energy technical assistance.[17]

Public Information – RBS
U.S. Department of Agriculture
Rural Business - Cooperative Service
USDA/RBS, Room 5045-S, Mail Stop 3201
1400 Independence Avenue SW, Washington, DC 20250-3201

Phone: (202) 690-4730
Web Site:
http://www.rurdev.usda.gov/rbs

[17] *See* DSIRE, *Federal: USDA – Rural Energy for America Program (REAP) Grants*, http://www.dsireusa.org/incentives/incentive.cfm?Incentive_Code=US05F&re=1&ee=1

9. Interaction with Vermont Utilities

The two most pertinent regulations for Group Net Metering are PSB Rule 5.100, which lays out the general terms for Net Metering Systems and PSB Rule 5.500 which is specific for Net Metering Systems over 150 kW in size.

The maximum size for a Net Metered renewable power system is currently 250 kW (AC). In addition the PSB includes Net Metering for fossil fueled combined heat and power system (Cogeneration), but the maximum size is 20 kW.

To protect baseload capacity requirements and preserve grid power quality, Vermont utilities are only required to accept Net Metering projects that total up to a capacity of 2% of the utilities reported peak demand from 1996 or more recent years-whichever is greater. So if a large number of Net Metering projects come online in the future, when overall Net Metered capacity meets the 2% threshold, then the utilities can refuse to allow additional interconnections. Accepting additional net metered projects beyond this level is at the utilities option.

There are two major submittals needed before installing a Net Metered system. The first is the application for a Certificate of Public Good, discussed previously in Section 7. If the application is reviewed and approved, the result is a Certificate of Public Good.
The Certificate is forwarded to the proper utility, however the current CPG format does not inform the utility if the project is an individual Net Metered entity or a Group Net Metered system, nor does the CPG include the specific member account information.

In addition to the CPG, an ***Interconnection Agreement*** must be made with the utility for any project evaluated under Rule 5.500. The utility may deem it necessary to employ Rule 5.500 for ***any*** size project, though it is only mandatory for projects over 150 kW. The application for this agreement is standardized and available from each utility. It is imperative that the application for the agreement is complete when submitted. There are "Net Metered Technical Specifications" that are required to be met to ensure the security of the grid and safety of operators.

Net-metered PV (solar electric) systems must conform to applicable electrical safety, power-quality and interconnection requirements established by the National Electrical Code (NEC), the Institute of Electrical and Electronic Engineers (IEEE) and Underwriters Laboratories (UL).

All systems must have a utility-accessible, lockable disconnect switch unless waived by the host utility.

The Group Administrator must be identified with all pertinent contact information. This person (or organization) will be responsible for timely payments of the monthly aggregated bill as well as the Point of Contact for any issues that arise.

Systems must be tested upon installation and every two years to determine that controls are functioning correctly to de-energize the system if the grid is shut down (called ***anti-islanding*** controls).

Utilities can always interconnect the Group Net Metered system, what is at issue is how the interconnection affects the existing grid, and the associated costs involved to make the interconnection viable. The utility needs to protect the integrity of the power grid for all its customers, and the safety of its workers. Net Metered systems that meet certain technical screening criteria are eligible for the "fast track" interconnection process, which requires no special studies. Systems not eligible for "fast track" interconnection may require a feasibility study, a system-impact study, and/or a facilities study. The utilities will estimate the cost of these studies, and it is the applicant who is responsible to cover the cost. Reasonable, specific timelines apply to "fast track" interconnection and general interconnection.

The Group Net Metered Project is also responsible for any grid infrastructure changes necessary for a viable interconnection.

During the interconnection process, either party may petition the PSB for resolution of a dispute.

The PSB has developed model interconnection documents, including a feasibility study agreement, a system impact study agreement, a facilities study agreement, an interconnection agreement, technical requirements and operator protocols. The utilities are not required to use the PSB models, but do have substantially similar templates.

Suggestions when Working with Your Utility

Talk to your ***Point of Contact*** (POC) at the utility early and often- open communication is important to streamlining the process- think of your utility as your ***partner*** in this endeavor.

Submit only a complete application! This includes all correct information regarding account holders, including proper names and addresses. Incomplete applications will be given a "healing" period outlined in Rule 5.500, but missing information delays the approval process.

Have an open and early discussion about site options- this can greatly affect the degree and complexity of grid integration studies as well as the level of grid upgrades that may be required to accommodate the interconnection.

In general it is more cost effective to:

- Be close to a major transmission line
- Have 3 phase power at the site
- Not be towards the end of a power line

Let the Utility POC know the status of the project- if it has been delayed, cancelled and most importantly- when it is ready to be put into service.

The Utility staff must be able to access to the main disconnect switch at the site so they can turn the generation equipment off if needed. This is important to consider if the system is roof mounted, fenced in or otherwise secured. Work out an access plan with the Utility early in the process.

The Group Administrator is the person **solely responsible** for educating the members regarding any rate changes and other implications due to joining the group- the utility does not have this responsibility. The excess power is credited at a standard rate, and does NOT include any ***Time of Use*** or **Demand** values (Peak/Off Peak).

The Administrator must have enough reserve funds to ensure prompt payment to the utility (if members are late in payment to Project Manager). If the Administrator is late in payment, **all** members get late notices and possible disconnection (with all associated costs).

The Administrator must send the change of membership account notice to the utility should be no less than 30 days. The actual change to membership should only occur at the end of a billing cycle.

Information on some of the Vermont Utilities

Green Mountain Power

Point of Contact:	**Pam Allen**
Title:	Electrical Engineer
Phone:	(802) 655-8766
Email:	Allen@greenmountainpower.biz
Address:	163 Acorn Lane, Colchester, VT 05446-6611

Regarding rollover credits:
If there is excess power produced over a 12 month period, it at Green Mountain Power's ***option*** to roll over the credit, pay the Group Net Metered project the value of the credit, or cancel the credit.

Payment Actions:
Payment is due upon receipt of the invoice. There is no penalty if paid before the next invoice is delivered (typically 28 days). If invoice is not paid in next billing cycle then commercial rate accounts are charged 1%/month over the original invoice. If the invoice is not paid by the end of the next billing cycle then a ***disconnect notice*** will be sent to all account holders.

Service Charges:
Green Mountain Power has the right to charge group net metered accounts for additional services including: individual meter reading, manual compilation of account groups, as well as any other activity beyond the normal simple billing procedure. They are currently not charging for these services but retain the right to charge for them in the future.

Washington Electric Cooperative Inc.

Point of Contact: **Bill Powell**
Title: Director, Products & Services
Phone: 802.223.5245 x 329
Email: bill.powell@wec.coop
Address: P.O. Box 8, East Montpelier VT 05651

Regarding rollover credits:
If there is excess power produced and not used within a 12 month period, the value of the power reverts to Washington Electric Cooperative without compensation to the Net Group Metering customers

Payment Actions: per PSB rule 3.100.

Services Charges:
Washington Electric Cooperative has the right to charge group net metered accounts for additional services including: individual meter reading, manual compilation of account groups, as well as any other activity beyond the normal simple billing procedure. They are currently not charging for these services but retain the right to charge for them in the future.

WEC PLANS to work with their billing software vendor on enabling master account billing. Both WEC & VEC use the same billing cooperative/vendor (NISC). This will allow us to bill various member accounts with a single invoice. The billing format that WEC has selected should provide all of the individual accounts billing details on the master bill.

Central Vermont Public Service

Point of Contact: **Larry Dodds**
Title: Power Systems Specialist III
Phone: (802) 747-5456
Email: LDodds@CVPS.com
Address: 77 Grove Street, Rutland, VT 05701

Regarding rollover credits:
If there is excess power produced and not used within a 12 month period, the value of the power reverts to Central Vermont Public Service without compensation to the net group metering customers,

Payment Actions:
Payment is due upon receipt of the invoice. There is no penalty if paid before the next invoice is delivered (typically 30 days). If the invoice is not paid by the end of the next billing cycle then a ***disconnect notice*** will be sent to all account holders. If invoice is not paid within 45 days then members can be disconnected, and are responsible for any and all reconnect costs.

Service Charges:
Central Vermont Public Service has the right to charge group net metered accounts for additional services including: individual meter reading, manual compilation of account groups, as well as any other activity beyond the normal simple billing procedure. They are currently not charging for these services but retain the right to charge for them in the future.

Vermont Electric Cooperative, Inc.

Point of Contact: **Dave Lahar**
Title: Key Accounts Manager
Phone: (802) 730-1214
Email: dlahar@vermontelectric.coop
Address: 42 Wescom Road, Johnson, VT 05656-9579

Regarding rollover credits:
If there is excess power produced and not used within a 12 month period, the value of the power reverts to Vermont Electric Cooperative without compensation to the Net Group Metering customers.

Payment Actions:
Payment is due upon receipt of the invoice. There is no penalty if paid before the next invoice is delivered (typically 30 days). If invoice is not paid within 45 days then all members will receive a ***Disconnect Notice***. After receiving the Disconnect Notice, if payment is not made within 5 days (summer) or 8 days (winter) the members may be disconnected, and are responsible for any and all reconnect costs.

Service Charges:
Vermont Electric Cooperative has the right to charge group net metered accounts for additional services including: individual meter reading, manual compilation of account groups, as well as any other activity beyond the normal simple billing procedure. They are currently not charging for these services but retain the right to charge for them in the future.

VEC has been working with their billing software vendor on enabling master account billing. This will allow us to bill various member accounts with a single invoice. The billing format that we have selected should provide all of the individual accounts billing details on the master bill.
For group net metering, we will add the generation meter account to the master bill. The generation account customer service charges and generation dollar credits will be calculated at the non-demand general service (commercial) rates.

10. Conclusion

There are many different options for approaching a renewable energy project, but this document is specifically intended to provide an overview and sufficient guidance for Vermonters to establish a community-scale renewable energy project. Groups that are interested in forming a CORE project should consult the Public Service Board website and Vermont legislation to determine if there have been any procedural changes to group net metering since this document was written. If a group has any additional questions, the Department of Public Service and the Public Service Board are both excellent resources.

Appendix A. Certificate of Public Good

Cover Letter

<Date>
Vermont Public Service Board
112 State Street
Montpelier, VT 05620-2701

Re: Proposed Group Net Metered Solar Array

Dear Sir or Madame,
<project coordinator> of <Town Name>, Vermont has submitted the enclosed information for your review in accordance with 30 V.S.A. § 248, Application for Certificate of Public Good for a Net Metered Power System on behalf of <Group Name, i.e. Sharon Community Solar Project> for a proposed system located at:

<Complete Address>

<Owner>, will own the system at <Street Address>. The <Group Name> will strive to supplement members' utility consumption with renewable generation, thus reducing per-capita greenhouse gas emissions. Power will be metered to the <Number of Group Members>, listed in Section 7 of the Application for a Certificate of Public Good. Group members will be required to sign an arbitration clause, resolving any and all group-management disputes without PSB or Utility involvement. <Project coordinator> will work with <Solar array installer> to install a <number> kW, max capacity, array. It will consist of <number> modules. The array will consist of <number> <how they will be mounted, i.e. static ground mounted> panels. <Include an aesthetic statement, i.e. Hedges, ornamental fruit trees, and other native plants will be planted to help mitigate visual impact of the project.>

Sincerely

Name
Project Coordinator

Name
Principal

Application Form

State of Vermont
Public Service Board

Application for a Certificate of Public Good for Interconnected Net Metered Power Systems

General Instructions:

Applicants must complete sections 1-3 and any other sections applicable to the type of system to be installed. Specific instructions for each type of system are included under the applicable section. For example, an applicant for a wind turbine system must complete sections 1-3, 5 and 8. **Failure to complete all applicable sections of this application may result in delay or denial.** Once the application form is completed, the applicant must mail the applicable sections of the completed application to the Public Service Board, the Vermont Department of Public Service, the applicant's respective utility, and to all other parties as specified in each of the sections applicable to the net metering project. For example, an applicant for a photovoltaic system installed on an existing structure is required to mail copies to the Public Service Board, the Department of Public Service, and his or her utility. Applicants must also submit a list of the persons that they have mailed a copy of the application in accordance with the instructions for each type of installation along with the completed application. It is recommended that the applicant contact their utility ***prior to applying for a certificate*** in order to determine whether the utility's capacity regarding net metering projects has been met. Please contact the Public Service Board at (802) 828-2358 if you have any questions regarding this application form.

Notice To Those With Concerns About The Net Metering Proposal

If you have received a copy of this application, you have the opportunity to comment on the project and to request a hearing before the Public Service Board to raise any concerns you may have regarding this project. For all systems *with the exception of photovoltaic systems on existing structures*, if you wish to comment to the Public Service Board about this proposal or request a hearing, you must file the comments and/or requests for hearing with the Board within 30 days of the date that the application was sent to the Board and all required parties. With respect to photovoltaic systems on existing structures, if you wish to comment to the Public Service Board about this proposal or request a hearing, you must file the comments and/or requests for hearing with the Board within *ten* working days of the date that the application was sent to the Public Service Board and all required parties. If you request a hearing, you must make a showing that the application raises a significant issue regarding one or more of the substantive criteria pursuant to 30 V.S.A. § 248. The Board may determine to hear evidence on the issue if it concludes that the project raises a significant issue with respect to one or more of those substantive criteria. Comments and requests for a hearing must be in writing and sent to the Board at 112 State St., Drawer 20, Montpelier, VT 05620-2701. If you have any questions, contact the Clerk of the Public Service Board at (802) 828-2358, e-mail address: psb.clerk@state.vt.us.

Applicant Information

- Section 1.

(Please print all information clearly)
Name:_____
Service Address (please include street name and number; no P.O. boxes):_____
_____
Town/City/State:_____
Zip Code:_____
Mailing Address (if different from above):_____
Daytime telephone:_____
Utility Account #:_____

Property owner name (if different than above):_____
Mailing address:_____
Town/City/State:_____
Zip Code:_____
Daytime Telephone:_____

Date application was sent to the Public Service Board and other parties as required by type of net metering project: _____

Applicant must indicate the date the application was sent to the Board and other parties, and also submit a list of the names and addresses of the parties notified of this application along with the completed application.

Installer Information

- Section 2.

Installer Name:_____
Mailing Address:_____
Town/City/State:_____
Zip Code:_____
Daytime Telephone:_____

Certification - Section 3.

The undersigned declares, under the pains and penalties of perjury, that:
(1) having exercised due diligence and made reasonable inquiry, the information which I have provided on this form and any attachments is true and correct to the best of my knowledge;

(2) the project for which this application seeks approval is in compliance with the land conservation measures contained in the applicable Town Plan which would apply if the project were not subject to 30 V.S.A. § 248;

(3) the project is in compliance with all applicable state and federal requirements and has the necessary approvals for operation of this type of system;

(4) any waste generated by the construction of this project will be disposed of at a state-approved disposal facility;

(5) any construction activities will follow the recommendations of *the Vermont Erosion Control Handbook* (available from the Agency of Natural Resources, 1-802-241-3770);

(6) the system is covered by an insurance policy with a minimum general liability of $100,000 for residential systems and $300,000 for non-residential sites;

(7) the system will be installed in compliance with the interconnection safety and technological requirements of Public Service Board Rule 5.100; and

(8) I have sent a copy of this complete application to all parties as required by this form.

Making false or misleading statements on this application is subject to penalties under 30 V.S.A. § 30 and/or revocation of any approval granted.

Signature_____ Date_____
Applicant

If installing a photovoltaic (PV) system, complete Section 4.*

If installing a wind system complete, Sections 5 and 8.

If installing another type of net metering system, complete Sections 6 and 8.

If installing a group system, complete the sections applicable to the net metering system employed and Section 7.

***Some PV systems must complete Section 8 (environmental information). See instructions in Section 4 below.**

Photovoltaic System (PV) Information

- Section 4.

PV Module Manufacturer:

Module Model Number:

Number of Modules:

Power Rating per Module:_____DC Watts

Total Array Output:_____DC Watts (no. of modules x power rating)

System Rated Output:_____AC Watts (total array output x .95)

Inverter Manufacture:

Inverter Model Number:

Inverter's Continuous AC Rating:_____AC Watts

Describe the physical location of the installation and/or mounting structure:

Describe the physical location of the facility's lockable disconnect switch:

State whether you are installing your PV system on (*answer yes or no*): an existing home or business ___ a new home or business___ a pole mount___ other (please describe)_____

If you are installing a system that is not attached to a an existing or new home or business, you must also complete Section 8 of this application.

Notice Requirements:
If you are installing a PV system on a new or existing home or business, you must send copies of this application to the Public Service Board at 112 State Street, Drawer 20, Montpelier, VT 05620-2701, the Vermont Department of Public Service at 112 State St., Drawer 20, Montpelier, VT 05620-2601; and your utility.

If you are otherwise installing your PV system on a new structure, such as a pole mounted system, then you must send a copy of the application to the Public Service Board, the Vermont Department of Public Service, your utility, the Planning Division, Agency of Natural Resources, Center Building - Third Floor, 103 South Main Street, Waterbury, VT 05671-0301; your local planning commission; the municipal legislative body for the town in which the system is to be installed (typically, the selectboard); and all adjoining landowners.

Please note that all applicants must submit a list of the parties notified along with the completed application.

Wind System Information - Section 5.

Wind Turbine Manufacturer:

Turbine Model Number:

Turbine Tower Height:_____ft

Turbine Tower Diameter_____ft

Rotor Diameter:_____ft

Wind Turbine Power Output:_____Watts
(Peak output up to 30mph wind speed)

AC Source (circle one): Inverter Synchronous Generator Induction Generator

Describe the physical location of the installation and/or mounting structure:

Describe the physical location of the facility's lockable disconnect switch:

If using an inverter, complete the following:

Inverter Manufacturer:

Inverter Model Number:

Inverter's Continuous AC Rating:_____AC Watts

System Rated Output:_____AC Watts
(wind turbine power output x .95)

All applicants for wind systems must also complete Section 8 (Environmental Information) below.

Notice Requirements:
If interconnecting a wind system, you must send copies of this application to the Public Service Board at 112 State Street, Drawer 20, Montpelier, VT 05620-2701, the Vermont Department of Public Service, 112 State St., Drawer 20, Montpelier, VT 05620-2601; your utility; your local planning commission; the municipal legislative body for the town in which the system is to be installed (typically, the selectboard); the Planning Division, Agency of Natural Resources, Center Building - Third Floor, 103 South Main Street, Waterbury, VT 05671-0301; and your adjoining landowners.

Please note that all applicants must submit a list of the parties notified along with the completed application.

Other Types of Systems - Section 6.

Description of the type of net metering system employed (fuel cell, hydroelectric, biomass, etc.)

Manufacturer:

Model Number:

Rated Power Output (AC continuous):_____

System Rated Output (power output x .95) :_____AC Watts

AC Source (circle one): Inverter Synchronous Generator Induction Generator

Describe the physical location of the installation and/or mounting structure:

Describe the physical location of the facility's lockable disconnect switch:

If using an inverter, complete the following**:**
Inverter Manufacturer:

Inverter Model Number:

Inverter's Continuous AC Rating:_____AC Watts

Describe the physical location of the installation and/or mounting structure:

Describe the physical location of the facility's lockable disconnect switch:

All applicants for systems under this section must also complete Section 8 (Environmental Information) below.

Applicants for hydroelectric systems must submit copies of all necessary federal and state approvals for the project along with this application.

Notice Requirements:
If interconnecting a system, you must send copies of this application to the Public Service Board at 112 State Street, Drawer 20, Montpelier, VT 05620-2701, the Vermont Department of Public Service, 112 State St., Drawer 20, Montpelier, VT 05620-2601; your utility; your local planning commission; the municipal legislative body for the town in which the system is to be installed (typically, the selectboard); the Planning Division, Agency of Natural Resources, Center Building - Third Floor, 103 South Main Street, Waterbury, VT 05671-0301; and your adjoining landowners.

Please note that all applicants must submit a list of the parties notified along with the completed application.

Please note that in order for a system to be eligible for net metering it must employ a renewable energy source that is being consumed at a harvest rate at or below its natural regeneration rate, pursuant to Board Rule 5.100.

Group System Information - Section 7.

If interconnecting a group system, applicants must provide the required application information corresponding to the type of net metering system(s) to be constructed as outlined in sections 4-6. In addition, applicants must also provide on a separate sheet:

(1) the meters to be included in the group system identified by account number and location;

(2) a method for adding and removing meters included in the group system;

(3) a designated person, including address and telephone number, responsible for all communications from the system to the serving electric utility, for receiving and paying bills for any service provided by the serving utility for the system, and for receiving and other communications regarding the group system; and

(4) a binding process for the resolution of any disputes within the group system relating to net metering that does not rely on the serving electric utility, the Public Service Board or the Department of Public Service.

Applicants for group systems must also provide a map or site plan showing the property on which the generation facility is located and the locations of the group members' properties.

Please note that all meters included in a group system must be within the same electric utility service territory in which the generation facility is located.

Environmental Information - Section 8.

You must complete this section if you are installing any one of the following:

- **A PV system on a new structure which is not a home or a business under Section 4**
- **A wind system under Section 5**
- **A system under Section 6**

(1) State whether the system will be sited on, near, or within any of the following (*answer yes or no)*: a floodway___ shoreline____stream____wetland___ historic site or district___ rare and irreplaceable natural area____ necessary wildlife habitat___ area where an endangered species is present____

If the answer to any one of the foregoing is yes, please attach a separate sheet:
(a) showing the location of the system in relation to the resource, and
(b) stating the impact which the system, including its installation, will have on the protected resource and what measures, if any, will be taken to minimize any such impact.

(2) On a separate sheet, describe the visible and aesthetic impact of the project and why it will not have an undue adverse effect on aesthetics and the scenic and natural beauty of the area. Include a specific statement about the visibility of the facility from adjoining properties; and, if it is highly visible, what measures you have taken, if any, to minimize the visible impact.

Attachments

1. List of Parties Notified

PARTIES NOTIFIED
(PV INSTALLATION, NOT ON PRE-EXISTING STRUCTURE)

VERMONT PUBLIC SERVICE BOARD
112 State Street
Montpelier, VT 05620-2701

VERMONT DEPARTMENT OF PUBLIC SERVICE
112 State Street
Montpelier, VT 05620-2701

<GROUP'S UTILITY>
Address

PLANNING DIVISION, AGENCY OF NATURAL RESOURCES
Center Building—Third Floor
103 South Main Street
Waterbury, VT 05671-0301

LOCAL PLANNING COMMISSION
Address

MUNICIPAL LEGISLATIVE BODY (TYPICALLY THE SELECTBOARD) FOR THE TOWN WITHIN WHICH THE GENERATION FACILITY IS LOCATED
Address

ALL ADJOINING LANDOWNERS:

NAME
Address

NAME
Address

2. Satellite Image

3. Visual, Aesthetic & Environmental Impact

Make note of any potential concerns, address possible impacts and suggest precautions and preventative measures that can be taken to avoid negative impact (such as tree-planting and erosion control).

Appendix B: CORE Net Metering Agreement Example

This contract should not be considered legal advice, and it is intended only to assist and expedite professional assessment. This model is attached simply as an example of what may be an adequate contract for a CORE project. It does not purport to be, and is not the equivalent of, the work of a licensed professional with expertise in this area. Before making significant decisions based on this work, it would be appropriate to consider consultation with a licensed professional with expertise in this field.

Group Net Metering Agreement

This Community Net Metering Agreement ("Agreement") is made and entered into this ____ day of _____, 20__ ("Effective Date"), by and between __<name of landowner>__ ("Licensor") and __<group member names>__ ("Members" or "Licensee").

W I T N E S S E T H:

WHEREAS, Licensor is the owner of certain real property in __<county>__ County, Vermont, located at _____ and described by satellite photograph in Exhibit B ("Premises").

WHEREAS, Licensor has or shall install a ___ kW solar photovoltaic system on such Premises.

WHEREAS, Licensor intends to provide renewable energy generation which can be used to offset Member's utility bills upon the terms and conditions as contained herein;

WHEREAS, Members are electric utility customers within the same utility service territory and Members have reliably paid, at a minimum, the past six (6) electricity bills on time and in full;

WHEREAS, Members desire to receive utility bill offsets from renewable energy generation on the terms and conditions as contained herein;

WHEREAS, Licensor will use the capital from Members' pay-in, described herein, to purchase and install the solar photovoltaic system and operate, maintain and upgrade the same system as necessary to maintain the expected yearly return for Members The expected yearly return for a group member buy-in of $___ is $____.

WHEREAS, Members acknowledge they are not participating in this Agreement for monetary profit and are deciding in good faith to buy-in at a value meant to offset their utility bills to zero without significant excess carryover.

NOW, THEREFORE, for and in consideration of the covenants and obligations contained herein and other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, the Parties hereto agree as follows.

Terms and Conditions

The solar photovoltaic generation facility located on the Premises has a maximum capacity of <Number> kW. The generation offsets are divided into <Number> units of 2 kW maximum capacity. Members agree that they will not acquire units that equal more than twenty percent (20%) of the total maximum capacity of the facility.

A. Membership

1. Adding Members

Members agree that new members may be added to the group at the Administrator's discretion, and the addition will become effective 30 days after the administrator provides notice to the Public Service Board, Department of Public Service and <the utility>. New members must reside in the same utility service territory as the generation facility, and the addition of new members shall not negatively impact the value of current members' utility offset.

(a) New members should be added to avoid the group being a net-producer over the course of a year, or to maximize the returns of the production facility.

(b) The Administrator shall not approve a new member unless the potential new member provides the Administrator with documentation showing that the potential new member paid his/her electricity bills for each of the previous six (6) months on time and in full.

2. Removing Members

(a) *Voluntary/At member's discretion*

Members agree that a Member may exit the Group by giving the Administrator 60 days notice and by forfeiting that Member's total Unit Purchase entrance fee (defined in ***Section B (1)***, below). The Member may, however, recover year-to-date utility offsets, payable within 60 days of the Member notifying the Administrator of the Member's intent to exit the Group. The Administrator shall, however, ensure that the Member's utility-offset refund does not exceed the Member's year-to-date utility bill payments.

(b) *Involuntary/At group's discretion*

Members agree that they may be removed for nonpayment or incomplete payment of utility bills if the Member fails to pay an electricity bill within 60 days after the Administrator issues the first notice. After Administrator issues a first and second payment-due notice to a member (as directed in Section above) and 30 days after <the utility> issued the electricity bill, whichever is later, the group administrator may issue notice to a non paying member that the member will be removed from the group unless that member contacts the Administrator and assures payment in-full within five (5) business days. If, after five (5) business days, the Administrator has not received payment in full, the Administrator may, at his/her discretion, remove the Member from the group by notifying the Public Service Board, Department of Public Service, <the utility>, and the member in writing that the non-paying member's meter shall be removed from the group. Members agree that any disputes arising out of this removal will be addressed under the dispute resolution clauses below.

Members agree that Members who are removed from the group for non-payment of bills will not receive a refund from their initial deposit. However, Members removed for non-payment will receive the year-to-date value of electricity bill offsets.

(c) *At Member's Death*

In the unlikely event of a Member's death, Members agree that, at the Administrator's discretion, a surviving spouse who resides in the net metered residence may be approved as a new member without fulfilling the potential new member requirements outlined in Section A(1) of this agreement. If the surviving spouse is admitted into the group, Members agree, that the spouse is not required to make a Unit Purchase but rather, the spouse "inherits" the deceased's Units. If the surviving spouse is admitted into the group, the Administrator shall, within two (2) business days of admittance, notify the Public Service Board, the Department of Public Service and <the utility> of the previous Member's death and the surviving spouse's assumption of the Membership.
If the deceased Member leaves no surviving spouse, the deceased Member's membership shall be deemed terminated at death. Any year-to-date utility offsets that the deceased Member has earned shall be paid by the Administrator to the deceased Member's estate within thirty (30) days of the Administrator receiving notice of the Member's death. The Administrator shall also contact and notify the Department of Public Service, the Public Service Board and <the utility> of the Member's removal from the group within five (5) business days of the Administrator receiving notice of the Member's death.

B. Group Administrator

The Administrator shall be selected by a majority of the Parties to this Agreement for a term of three years. If no candidate receives a majority of votes, a run-off must be held between the two candidates with the highest number of votes. An election must be held every three years on the day of execution of this Agreement. Every non-election year on the day of this Agreement's execution, the Parties are required to hold a confidence-no confidence vote. If a majority of the Parties cast votes for no confidence, an election must be held within fourteen (14) days to select an interim Administrator who will serve out the remainder of the term.

Each party to this Agreement shall have one vote, and each may nominate any candidate to be the Administrator.

An Administrator shall be selected within three (3) calendar days of the execution of this Agreement following the procedures set forth herein.

If the Administrator resigns or is physically or mentally incapable of performing his or her duties, selection of a new Administrator must take place within seven (7) calendar days.

C. Finance

1. Unit Purchase

Members agree to pay a one-time entrance fee of <Number> dollars per unit. Payment from the purchase of a unit is due upon official formation of the group, or upon the Administrator's approval of a new member, and shall be payable to <Group's escrow account> ("Group Account").

2. Group Account

The Group Account shall be used solely for payment of electricity bills, equipment purchase and maintenance, administrative costs, insurance costs, and other reasonable expenses related to the system operation.

(a) Disbursements for any expenses not listed here, or which equal to a ____% of the total funds held in the Group Account, must be approved by a majority of Members.

(b) The Administrator shall ensure that the Group Account maintains a minimum level of funds equal to _____ dollars.#

(c) The Administrator shall be responsible for managing and maintaining the Group Account. The Administrator is authorized to deposit and withdraw funds solely as is required under this Agreement.
(d) The Administrator may, at his/her discretion and after verifying that sufficient funds are available in the Group Account, hire a Certified Public Accountant (CPA) to manage the Group Account. The Administrator shall not guarantee the CPA a term of employment longer than one (1) year. The Administrator shall ensure that any actions taken by the CPA, in relation to the Group Account, do not conflict with the terms of this agreement.

3. Payment of Bills and Distribution of Funds

(a) Assignment of Bills

The Administrator agrees to notify all members, in writing, within 5 days of receiving the itemized, aggregate bill from <the utility>. The notification shall include the following information: (1) the member's electricity consumption for that billing cycle, in kWh; (2) the total amount due by that member, before generation offsets have been distributed, in dollars ($); (3) the value of offsets that member has earned during the billing cycle, in dollars ($); (4) the cumulative total value of offsets that member has earned since the previous annual disbursement, including the value in item (3), in dollars ($). An example of such a bill may be found in Exhibit C.

(b) Distribution of offsets

The group administrator agrees to distribute offsets by allocating them by percentage. Each member owns a certain number of units, and each unit represents <Number> percent of the total installation. Thus, the member's "Percent Offset" equals the number of units owned by the member multiplied by <Number> percent.

(i) Upon receiving the bill from <the utility>, the group administrator shall calculate each member's generation offset by multiplying the group total offset, appearing on the utility bill, by each member's respective "percent offset". This value shall appear as item three (3) in the group administrator's notification in Exhibit C.

(ii) The Administrator shall disburse group members' offsets annually, beginning 12 calendar months after the first disbursement which shall occur <Date>#. The group administrator shall ensure that no member receives an annual disbursement greater than that member's cumulative electricity bills for the same time period. If, upon annual disbursement, a Member's cumulative offsets exceed that Member's cumulative electricity costs, Members agree that the excess funds shall be retained in the Group Account.

(c) Member Payment of Bills

Members agree to pay their complete, non-offset, electricity bill within 15 days of receiving notification from the group administrator. This payment shall be made to the Group Account.

(i) In the event of non-payment the group administrator shall send a second notice, 15 days after sending the original notice, to any and all members who have not paid their electricity bill.

(ii) If, 15 days after the Administrator sends the second notice, a Member has not paid the amount in full, the Administrator may, at his/her discretion, commence the process (as outlined below) to remove that Member from the group.

(d) Payment of Bills to Utility
The Administrator shall pay <the utility> the amount due at each billing cycle with funds drawn from the Group Account. This payment shall be made before the due date noted on the bill, but after the group administrator has verified that sufficient funds are available in the Group Account. At the group administrator's discretion, automated withdrawal from the Group Account to <the utility> may be set up.

4. Annual Membership Fee/Maintenance Account
Members agree to pay an annual fee equivalent to 5% of the respective member's annual, cumulative utility bill discount. This fee is due within thirty (30) days of the annual disbursement of the utility refund (described in Section B (3)(d) above). This fee shall be deposited into Group Account.

D. Landowner Agreement

1. Grant
(a) Licensor hereby grants to Licensee a non-exclusive license:
(1) To install, maintain, operate, and remove, at Licensee's sole expense and risk, certain "Solar Photovoltaic Generation Equipment" upon <This specific space>, and interconnect with the electric grid <at this specific place>.
(2) To install, maintain, operate, and replace at Licensee's sole expense and risk, certain "Connecting Equipment" (<*Moderately specific list of specific equipment*>) as specifically described in Exhibit A. Licensee's "Generation Equipment" and "Connection Equipment" are collectively referred to in this Agreement as "Licensee's Equipment."

(b) Licensor shall provide to Licensee approximately <##> square feet of space upon and within <specific location> as designated on Exhibit B and shall provide physical access to that space to the degree specified as necessary on Exhibit B.

(c) Licensor may, in its sole and reasonable discretion, at Licensee's expense, relocate any or all of Licensee's Equipment on Licensor's property, provided that such relocation does not render Licensee's utilization of the site impracticable.

2. Relationship Indemnification
Licensor and Licensee acknowledge and agree that the relationship between them is solely that of independent contractors, and nothing herein shall be construed to constitute the parties as employer/employee, partners, joint ventures, co-owners, or otherwise as participants in a joint or common undertaking. Neither party nor its employees, agents, or representatives shall have any right, power or authority to act or create any obligation, express or implied, on behalf of the other. Licensee hereby accepts and assumes full and exclusive liability for, and shall hold Licensor harmless from, the payment of all taxes, monies, and other expenses arising from the conduct of Licensee's business in the building, including without limitation, contributions required under state and federal law providing for state and federal payroll taxes or contributions for unemployment insurance or old age pensions, or annuities which are measured by wages, salaries or other remuneration paid to Licensee or by Licensee to its employees for any and all activities in connection with this Agreement.

3. Warranties
Licensor makes no warranty or representation that the space indicated in Exhibit B is suitable for the Licensee's use, it being assumed that Licensee has satisfied itself thereof. Licensee has inspected the space indicated in Exhibit B, and accepts the same "as is" and

agrees that Licensor is under no obligation to perform any work or provide any materials to prepare the space indicated in Exhibit B for Licensee.

4. Compensation

(a) Licensee shall compensate Licensor by providing compensation (the "License Fee") in the amount of <##> Unit(s) of generation capacity to offset Licensor's utility bill. Licensor shall become a Member of the group and the Licensor shall not be required to pay a unit fee unless the Licensor desires to purchase additional Units beyond the <##> Units of compensation. Licensor shall be compensated with utility bill offsets annually at the same time as all other members as described in **Section C(3)(d)**.

(b) Licensee makes no guarantee or representation of the monetary value of <##> unit(s) of generation capacity used to offset Licensor's utility bill. Licensor and Licensee understand and mutually agree that actual generation may vary from year to year and that the monetary value of such generation may vary from year to year.

(c) The annual License Fee shall by payable in one (1) annual installment, each year of the agreement, as required in Section C(3)(d). In the event that Licensee terminates this Agreement due to financial infeasibility, physical limitations of the installation, acts of nature rendering the site or installation unusable, or other reasonable grounds for termination, Licensee shall ensure the complete and successful removal—without undue delay—of the installation on Licensor's property described in Exhibit A.

5. Term

The term of this Agreement ("License Term") shall commence as of the day first written above ("Commencement Date"). The initial term hereof shall be <##> years ("Initial Term"), beginning on the Commencement Date, subject to extension or earlier termination in accordance with the provisions herein. Provided that Licensee is not in default of this Agreement, Licensee shall have the option to renew and extend this Agreement upon the same terms and conditions set forth herein, except as specifically stated herein, for <one (1)> additional <###> year period ("the First Renewal") by giving written notice of such an intent to Licensor no more than one-hundred and eighty (180) days and no less than sixty (60) days prior to the end of the Initial Term. Further renewals shall require the mutual agreement of both the Licensor and Licensee, as set forth in <set forth renewal options>.

6. Use

Licensee shall use the space detailed in Exhibit B subject to the terms and conditions herein and solely for the purpose of providing the services detailed in Exhibit A of this Agreement and which it has received all necessary approvals from the Vermont Public Service Board, the servicing Utility company <Name>, and the <local governing body/town select board>.

E. Acquisition of the Photovoltaic System

After the founding Members of the group, not including the landowner, hereinafter the "Core Members," deposit the Unit Purchase Fee (mentioned above) into the Group Account and after the Landowner has agreed to the terms of this contract, becoming a non-paying Member, and after the Group has received a Certificate of Public Good, the Administrator shall begin development of the generation facility.

The Administrator shall ensure that receipts from all purchases and labor costs relating to the facility's development are retained. Upon completion of the installation, the Administrator shall calculate the total, creditable, cost of installation by adding the costs of all expenses allowed under the 30% Federal Residential Renewable Energy Tax Credit.# The Administrator shall then allocate the creditable cost to each Core Members according to the Core Members' unit Ownership. A Core Member's creditable cost shall be equal to the total creditable cost multiplied by a fraction:

(a) the numerator of which equals the number of Units owned by that Core Member

(b) the denominator of which equals the total number of Units in the Group, less the two Units given the Landowner according to section ____, above.

After determining each Core Member's creditable cost, the Administrator shall issue each Core Member a Receipt that includes the Member's total Unit Purchase fee, the Member's creditable cost, the Group's total creditable cost, and the Member's creditable cost as a percentage of the Group's total creditable cost. The Administrator shall ensure that the Core Member's creditable cost does not exceed that Member's total Unit Purchase Fee. The Administrator shall affix to the Receipt a photocopy of all receipts and financial documentation obtained for the purchase and installation of the facility. The photocopies shall include all receipts upon which the Administrator relied to calculate the total creditable cost of installation.

The Administrator shall also provide each Core Member a document verifying that Member's membership in the group. Upon receipt of the first electricity bill from <the utility>, the Administrator shall provide each Core Member with a photocopy of the electricity bill which indicates that the Core Member's electricity meter is included within the group.

It shall be solely the individual Member's responsibility to retain all documentation provided by the Administrator. Individual Members are also solely responsible for preparing all relevant tax documentation to receive the 30% Federal Residential Renewable Energy Tax Credit.#

The Administrator makes no guarantee that any Member will receive the Residential Renewable Energy Tax Credit.

F. Dispute Resolution

(a) *Good Faith Negotiations.* If any dispute or controversy arises out of or relates to this Agreement, the Parties agree to exercise their best efforts to engage in good faith negotiations to find a solution that serves their respective and mutual interests, including their continuing relationship under this Agreement. Unless otherwise agreed, any party shall have seven (7) calendar days from the receipt of notice of the particular dispute or controversy to begin these negotiations and fourteen (14) calendar days from the notice to complete these negotiations.

(b) *Mediation.* If the negotiations do not take place within the time provided, or if the negotiations fail to conclude with a mutually agreed upon solution, the Parties agree to settle the dispute by mediation administered by the Administrator under the Commercial Mediation Procedures of the American Arbitration Association. If the Parties cannot agree upon a mediator, or if the Administrator is a party to the dispute or controversy, each shall select one name from a list of mediators maintained by the

Vermont Bar Association; the two selected shall then choose a third person who will serve as mediator. The Parties agree that any mediated settlement agreement may be converted to an arbitration award or judgment (or both) and enforced according to the governing rules of civil procedure. The Parties further confirm their motivating purpose in selecting mediation is to find a solution that serves their respective and mutual interests, including their continuing relationship under this Agreement.

(c) *Binding Arbitration.* If the mediation fails to conclude with a mutually agreed upon solution or if the Parties cannot agree upon a mediator, the Parties agree to submit to binding arbitration. If the Parties cannot agree upon an arbitrator, the person who served as mediator shall select an arbitrator from a list submitted by the Parties. The arbitrator's award prepared by the arbitrator shall be final, binding and may be converted to a judgment by a court of competent jurisdiction upon application by either party. The arbitrator shall have the same authority as a court of competent jurisdiction to grant legal or equitable relief, including interim measures upon written request with notice to the other party and after opposition and opportunity to be heard. The arbitrator shall take into consideration the Parties' intent to limit the cost and time it necessary to complete the dispute resolution process.

(d) Costs. The Parties agree to share the mediator's and arbitrator's fees equally. If the Dispute is arbitrated, the arbitrator may include in any award the right to recover mediator and arbitrator fees, along with any other recoverable costs.

(e) Attorney's Fees. When appropriate, the arbitrator may award attorney's fees incurred in the arbitration, if any, to the prevailing party.

(f) Notice of Dispute: Notice of any dispute or controversy shall be effective purusant to the Notice provision herein and shall provide sufficient details of the dispute or controversy to inform the other party of the basis of the claim.

F. General Provisions

Entire Agreement; Modification.
This Agreement sets forth the entire agreement and understanding between the parties as to the subject matter hereof and supersede all prior or contemporaneous agreements or understanding as between the parties relating to this subject matter. There shall be no amendments or modifications to this Agreement, except by a written document which is signed by all parties.

Governing Law; Jurisdiction. This Agreement shall be governed by and construed under the laws of the State of Vermont without regard to conflicts of laws principles. Any and all actions or proceedings seeking to enforce any provision of, or based on any right arising out of this letter of intent shall be settled by the dispute resolution procedures herein.
Headings. The headings for each article and section in this Agreement have been inserted for convenience of reference only and are not intended to limit or expand on the meaning of the language contained in the particular article or section.

Severability. Should any one or more of the provisions of this Agreement be held invalid or unenforceable by a court of competent jurisdiction, it shall be considered severed from this Agreement and shall not serve to invalidate the remaining provisions

herein. If the provision is material, the parties shall make a good faith effort to replace the invalid or unenforceable provision with a valid and enforceable one such that the objectives contemplated by them when entering this Agreement may be realized. If the parties fail to reach a modified agreement within forty-five (45) days after the relevant provision is held invalid or unenforceable, then the dispute shall be resolved in accordance with the procedures set forth herein. While the dispute is pending resolution, this Agreement shall be construed as if the provision were deleted by agreement of the parties.

No Waiver. Any delay in enforcing a party's rights under this Agreement or any waiver as to a particular default or other matter shall not constitute a waiver of such party's rights to the future enforcement of its rights under this Agreement, except only as to an express written and signed waiver signed by the party against whom such waiver is being enforced as to a particular matter.

Notices. Any notices required by this Agreement shall be in writing, shall specifically refer to this Agreement and shall be sent by registered or certified mail, postage prepaid, or by email if the party provides a valid address, or by overnight courier, postage prepaid, and shall be forwarded to the respective addresses set forth herein unless subsequently changed through notice to the other parties. Notice shall be deemed delivered upon the earlier of (a) when received, (b) three (3) days after deposit into the mail, (c) one (1) calendar day after notice is sent via email, or (d) the day immediately following delivery to overnight courier (except Sunday and holidays).

Counterparts. This Agreement may be executed in counterparts, each of which shall be deemed to be an original and together shall be deemed to be one and the same agreement.

IN WITNESS WHEREOF, the parties hereto have each caused this Agreement to be executed as of the Effective Date, when signed by the parties below.

_____	_____
Licensor	Member 1
Licensor Address	Address
Licensor Phone, Email	Phone, Email
_____	_____
Member 2	Member 3
Member Address	Address
Member Phone, Email	Phone, Email

Exhibit A: *List of all equipment required & technical diagram for installation*

Provide a detailed list of all interconnection, generation, installation, etc. equipment required for the facility.

Also provide a technical/circuit diagram covering the facility up to the point of grid connection.

Exhibit B: *Map depicting location of installation*

Approximate location of Generation Facility

Group Name
Group Administrator's Name
Group Administrator's Contact Information

Group Member's Name
Address
City, State Zip code

Billing Cycle:
Start Date: (Same as Date on Utility Bill)
End Date: (Same as Date on Utility Bill)
Due Date: (15 days after bill is mailed)
Amount Due:

Details:

Electric Consumption	in kWh
Cost per kWh	in $
Total Amount Due	**In $**
Electric Generation per Unit	in kWh (= total generation/total units)
Units owned by Member	#
Member's Generation	in kWh
Member's Offset	**In $**
Year-to-Date Offset	**In $**

Make Checks Payable to <Group Name> or deposit funds into account <Group Account>. For questions or concerns, contact the group administrator at the number indicated above.

Group Net Metering - Public Land Model

Notes, Assumptions & Conventions

Jan. 6, 2011. Authors: Powersmith Farm, Inc.; Marlboro College Graduate School;
Vermont Law School IEE. For information, contact Ralph Meima (rmeima@marlboro.edu)

Only fields highlighted in **yellow** are for manual data input. All other fields display calculated values.

	Values	***Units***	***Assumptions***
Economic	3%	APR	Inflation
	10%	APR	Discount rate
Plant	100	kW	Nameplate capacity lies between 100 kW and 250 kW
	876,000	kWh	Theoretical total annual production
	13%	Ratio	Capacity factor
	113,880	kWh	Total realised annual production
	$7.00	$/W	Average cost per installed watt, incl. panels, inverters, mounts, etc.
	0.16	kWh/$	Annual electrical production per invested dollar
Operations	12%	Ratio	Operation & maint. expenses' share of gross production value; incl. insurance
	12%	Ratio	Administrative expenses' share of gross production value
	10%	Ratio	Capital reserve fund set-aside percentage
	3%	Ratio	Membership non-payment reserve fund set-aside %
	$100,000	$	Salvage value incl. removal expenses
Group			1. Each member owns one equal share of total generator production.
	20	#	Total number of membership shares in group
	1.2	kW	Average member unit (household) consumption rate
	29	kWh	Average member unit consumption per day
	864	kWh	Average member unit consumption per month
	10,512	kWh	Average member unit consumption per year
Market	$0.14	$/kWh	Initial retail sale price of electricity
	$0.14	$/kWh	Initial retail electricity purchase cost
			Retail electric rates are forecast to inflate at fixed annual rate
Laws/Reg.			VT will not implement an RPS, thus creating no VT REC demand
			RECs and SRECs are defined as the same thing.
			Source of data for REC spot prices: http://www.srectrade.com/
	1	MWh	RECs are denominated in units of 1 MWh (= 1000 kWh)
	$250	$/MWh	Reference: REC price for 2010 Massachusetts SREC is $500/MWh
			REC prices are forecast to inflate at fixed annual rate of inflation (see above)
			1. This project may require a Certificate of Public Good.

		2. Net-metered solar projects under 150 kW need no Certificate of Public Good
Incentives		
Federal ITC	30%	1. Federal investment tax credit
		2. It is assumed that tax credit eligibility pre-approval has been obtained.
		3. Since the facility is rated at less than 2.2 MW, it is eligible for this tax credit.
MACRS		1. Depreciation of 50% in the first year, and flat depreciation over the remainder.
VT Bus. ITC		1. Not included in this model: the program is wait-listed and its future uncertain.

Group Net Metering - Public Land Model

Membership View of Financial Benefits

Authors: Powersmith Farm, Inc.; Marlboro College Graduate School; Vermont Law School IEE. For information, contact Ralph Meima (rmeima@marlboro.edu)

	Units															
Variables																
Price of electricity	$/kWh	$ 0.14														
Nameplate system capacity	kW	100														
Capacity factor	%	13%														
Average realized annual output rate of system	kW	113,880														
MEMBERSHIP INITIAL CAPITAL INVESTMENT SHARE																
Net Initial Capital investment/Membership	$	-$24,500														
		Year 1	***Year 2***	***Year 3***	***Year 4***	***Year 5***	***Year 6***	***Year 7***	***Year 8***	***Year 9***	***Year 10***	***Year 11***	***Year 12***	***Year 13***	***Year 14***	***Year 15***
Total number of memberships	#	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20
UTILITY BILL EFFECTS																
Utility Bill Without Net-Metering Group:																
Actual consumption for this membership (Sample)	kWh	-7,008	-7,800	-7,200	-6,500	-8,000	-7,200	-7,500	-7,000	-7,600	-6,900	-7,100	-6,500	-8,000	-7,800	-7,008
=> Annual cost of electricity	$	-$981	-$1,092	-$1,008	-$910	-$1,120	-$1,008	-$1,050	-$980	-$1,064	-$966	-$994	-$910	-$1,120	-$1,092	-$981
(Negative means payable to the utility)																
Utility Bill With Net-Metering Group:																
Actual consumption for this membership (from above)	kWh	-7,008	-7,800	-7,200	-6,500	-8,000	-7,200	-7,500	-7,000	-7,600	-6,900	-7,100	-6,500	-8,000	-7,800	-7,008
Annual production share/membership	kWh	5,694	5,694	5,694	5,694	5,694	5,694	5,694	5,694	5,694	5,694	5,694	5,694	5,694	5,694	5,694
Net consumption/production	kWh	-1,314	-2,106	-1,506	-806	-2,306	-1,506	-1,806	-1,306	-1,906	-1,206	-1,406	-806	-2,306	-2,106	-1,314
(Negative = Net Consumer)																
=> Annual cost of electricity	$	-$184	-$295	-$211	-$113	-$323	-$211	-$253	-$183	-$267	-$169	-$197	-$113	-$323	-$295	-$184
(Negative means payable to the utility)																
=> Utility bill savings by joining group	$	$797	$797	$797	$797	$797	$797	$797	$797	$797	$797	$797	$797	$797	$797	$797
=> Accumulated savings over first 10 years	$	$7,972														
=> PV of utility bill savings over 15 years	$	$6,063														
SYSTEM OPERATIONS EFFECTS																
Share of Total System Operating Cashflow		$454	$468	$511	$557	$606	$658	$714	$773	$835	$901	$972	$1,046	$1,125	$1,209	$1,298
=> TOTAL OPERATING CASHFLOW IMPACT																
Share of Taxable Income (+) or Loss (-)		-$11,692 Loss	-$2,488 Loss	-$2,442 Loss	-$2,392 Loss	-$2,340 Loss	$778 Income	$837 Income	$900 Income	$966 Income	$1,037 Income	$1,111 Income	$1,190 Income	$1,273 Income	$1,362 Income	$1,455 Income

Appendix D: Business Models Pros and Cons

1. Contractual Relationship (CORE Example of Multilateral Licensing Agreement)

- **a. Pros**
  - **i.** Easy to set up and inexpensive to set up
  - **ii.** Extremely flexible, can be structured in precisely the manner that the parties desire
  - **iii.** 30% investment tax credit available to multiple parties
  - **iv.** Flexible in terms of membership size if the group grows or shrinks over time
- **b. Cons**
  - **i.** Parties may be personally liable
    - **1.** Can be shielded by Insurance
  - **ii.** Significant IRS paperwork required for this divided investment tax credit

2. Cooperatives

- **a. Pros**
  - **i.** One stock, one vote.
  - **ii.** Limited tax burden.
  - **iii.** Limited liability (for debt and tort liability) for coop members.
- **b. Cons**
  - **i.** Consumers cooperative statute requires:
    - **1.** Interest or dividend cannot exceed 6% annually;
    - **2.** 10% or more of annual profits must be set aside as a reserve fund until there is an accumulated fund of at least 50% of initial capital stock; and
    - **3.** Remainder of profits must be distributed uniformly based on amount of purchases or sales (or "business") through the coop by the shareholders.
  - **ii.** If the coop purchases the solar panels, it may not be able to receive the benefit of the 30% investment tax credit. (because the L3C/LLC would not have a "tax appetite")
    - **1.** This makes financial viability questionable, and complicates issues of raising capital or requiring member loans.

3. L3C (Low Profit Limited Liability Company) or LLC - a Special Purpose Entity

a. **Pros:**
   i. Limit Shareholder Liability -- in the event that there is a system malfunction damaging the distribution or transmission systems, the entirety of the shareholders' assets would not be available for recovery
   ii. The system can be financed on a "project" basis
   iii. The "Owner" can be made responsible for purchasing and maintaining insurance
   iv. Financing entity (if used) can receive tax benefits from funding a renewable energy source
   v. No Corporate Taxes
   vi. Production tax credits may still be available (federal)
   vii. Flexible
b. **Cons:**
   i. If the Entity purchases the solar panels, it would not be able to receive the benefit of the 30% investment tax credit. (because the L3C/LLC would not have a "tax appetite")
      1. This makes financial viability questionable
   ii. For L3C specifically, it will be difficult to sell our project as "charitable" or otherwise exempt under IRC.
   iii. Complicated membership transferability (due to SEC regulations)

4. Lease Structure

a. **Pros**
   i. a single, tax advantaged, investor can purchase the structure and receive the 30% investment credit with limited paperwork/headache
      1. The 30% credit allows for 1 year carry-back and 20 years carry-forward, so ideally this investor would be able to apply the 30% to a single year carry-back
   ii. Thereafter, the investor can lease the system back to the developer or and LLC
      1. Investor has the security of receiving fixed rent
      2. Very low-risk investment for the owner, but provides needed upfront capital to the developer
   iii. Can integrate an 'option to purchase' if the group members decide they enjoy the ongoing benefits, they can purchase the system from the investor.
b. **Cons**
   i. You have to be able to find an investor

ii. Because it's a lease, there will a large number of covenants between lessor and lessee - in the event that the developer/group defaults on one of the covenants, the property can revert back to the investor entirely (not a lot of security for the group) (but, if the group makes yearly investments instead of large up-front investments, this may not be a large problem)

iii. The developer cannot take full advantage of the 30% investment credit unless the investor fully discloses his/her return. This means that the developer may not negotiate the best deal

iv. The actual lease requires extensive documentation/time

v. Rent is a taxable income for the investor (but not since he's getting units in return)

5. Limited Partnership

a. **Pros**:

i. Fairly easy to set up & very flexible - any requirements can be written in (within reason) to achieve an optimized relationship

ii. If group members jointly purchase the property, the 30% investment tax credit can be applied to each of their contributions so long as the system has been evaluated and deemed to provide electricity to each member.

1. Not a lot of previous cases where this was attempted, but IRS says it looks like GNM qualifies

iii. Insurance can be purchased to limit actual liability

iv. A group member can own the land on which the solar panels are built, and other members can indemnify that land owner, plus VT and various localities have property tax benefits for renewable energy installations.

v. If there is a problem with cash flow, the risk of losing the system entirely is much lower than if it's a lease relationship where failing to pay rent can be the end of the deal

b. **Cons**:

i. Each individual Group Member's assets are available in the event of litigation.

ii. Large up-front cost for the group members or developer (i.e. the group members essentially become the investors)