

## Administrative Procedures – Final Proposed Rule Coversheet

**Instructions:**

In accordance with Title 3 Chapter 25 of the Vermont Statutes Annotated and the “Rule on Rulemaking” adopted by the Office of the Secretary of State, this final proposed filing will be considered complete upon the submission and acceptance of the following components to the Office of the Secretary of State and to the Legislative Committee on Administrative Rules:

- Final Proposed Rule Coversheet
- Adopting Page
- Economic Impact Statement
- Public Input Statement
- Scientific Information Statement (if applicable)
- Incorporated by Reference Statement (if applicable)
- Clean text of the rule (Amended text without annotation)
- Annotated text (Clearly marking changes from previous rule)
- Copy of ICAR acceptance e-mail
- A copy of comments received during the Public Notice and Comment Period.
- Responsiveness Summary (detailing agency’s decisions to reject or adopt suggested changes received as public comment).

All forms submitted to the Office of the Secretary of State, requiring a signature shall be hand signed original signatures of the appropriate adopting authority or authorized person, and all filings are to be submitted, no later than 3:30 pm on the last scheduled day of the work week.

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**Certification Statement:** As the adopting Authority of this rule (see 3 V.S.A. § 801 (b) (11) for a definition), I approve the contents of this filing entitled:

**Rule Title: 5.100 Rule Pertaining to Construction and Operation of Net-Metering Systems**

\_\_\_\_\_, on \_\_\_\_\_.  
(signature) (date)

Printed Name and Title:

James Volz, Chairman, Public Service Board

RECEIVED BY: \_\_\_\_\_

- Final Proposed Rule Coversheet
- Adopting Page
- Economic Impact Statement
- Public Input Statement
- Scientific Information Statement (if applicable)
- Incorporated by Reference Statement (if applicable)
- Clean text of the rule (Amended text without annotation)
- Annotated text (Clearly marking changes from previous rule)
- ICAR Approval received by E-mail.
- Copy of Comments
- Responsiveness Summary

1. TITLE OF RULE FILING:

5.100 Regulations Pertaining to Construction and Operation of Net-Metering Systems

2. PROPOSED NUMBER ASSIGNED BY THE SECRETARY OF STATE

16P-062

3. ADOPTING AGENCY:

Vermont Public Service Board

4. PRIMARY CONTACT PERSON:

*(A PERSON WHO IS ABLE TO ANSWER QUESTIONS ABOUT THE CONTENT OF THE RULE).*

Name: Jake Marren, Esq.

Agency: Vermont Public Service Board

Mailing Address: 112 State Street, Montpelier, VT 05602

Telephone: 802 828 - 2358 Fax: 802 828 - 3351

E-Mail: jake.marren@vermont.gov

Web URL(*WHERE THE RULE WILL BE POSTED*):

<http://psb.vermont.gov/about-us/statutes-and-rules/proposed-changes-rule-5100>

5. SECONDARY CONTACT PERSON:

*(A SPECIFIC PERSON FROM WHOM COPIES OF FILINGS MAY BE REQUESTED OR WHO MAY ANSWER QUESTIONS ABOUT FORMS SUBMITTED FOR FILING IF DIFFERENT FROM THE PRIMARY CONTACT PERSON).*

Name: John Gerhard, Esq.

Agency: Vermont Public Service Board

Mailing Address: 112 State Street, Montpelier VT 05602

Telephone: 802 828 - 2358 Fax: -

E-Mail: John.Gerhard@vermont.gov

6. RECORDS EXEMPTION INCLUDED WITHIN RULE:

*(DOES THE RULE CONTAIN ANY PROVISION DESIGNATING INFORMATION AS CONFIDENTIAL; LIMITING ITS PUBLIC RELEASE; OR OTHERWISE EXEMPTING IT FROM INSPECTION AND COPYING?)* No

IF YES, CITE THE STATUTORY AUTHORITY FOR THE EXEMPTION:

PLEASE SUMMARIZE THE REASON FOR THE EXEMPTION:

7. LEGAL AUTHORITY / ENABLING LEGISLATION:

*(THE SPECIFIC STATUTORY OR LEGAL CITATION FROM SESSION LAW INDICATING WHO THE ADOPTING ENTITY IS AND THUS WHO THE SIGNATORY SHOULD BE. THIS SHOULD BE A SPECIFIC CITATION NOT A CHAPTER CITATION).*

Act 99 of 2014, Sec. 4 (an act relating to self-generation and net-metering)(codified at 30 V.S.A. § 8010(c)).

8. THE FILING HAS CHANGED SINCE THE FILING OF THE PROPOSED RULE.
9. THE AGENCY HAS INCLUDED WITH THIS FILING A LETTER EXPLAINING IN DETAIL WHAT CHANGES WERE MADE, CITING CHAPTER AND SECTION WHERE APPLICABLE.
10. SUBSTANTIAL ARGUMENTS AND CONSIDERATIONS WERE RAISED FOR OR AGAINST THE ORIGINAL PROPOSAL.
11. THE AGENCY HAS INCLUDED COPIES OF ALL WRITTEN SUBMISSIONS AND SYNOPSES OF ORAL COMMENTS RECEIVED.
12. THE AGENCY HAS INCLUDED A LETTER EXPLAINING IN DETAIL THE REASONS FOR THE AGENCY'S DECISION TO REJECT OR ADOPT THEM.

13. **CONCISE SUMMARY (150 WORDS OR LESS):**

Pursuant to 30 V.S.A. §§ 8010(c)(1)and (2), the Public Service Board has established rules for the installation and operation of net-metering systems.

The proposed rule addresses the following subjects.

1. The standards and procedures for the review of registrations and applications to construct net-metering systems.
2. Procedures for public participation in the review of net-metering applications.
3. The terms and conditions of net-metering service that electric utilities must offer to customers.
4. The obligations of net-metering customers and requirements for the operation and decommissioning of net-metering systems.
5. The standards and procedures for enforcement proceedings involving net-metering systems.

14. **EXPLANATION OF WHY THE RULE IS NECESSARY:**

The rule is necessary because it is required by 30 V.S.A. § 8010(c).

**15. LIST OF PEOPLE, ENTERPRISES AND GOVERNMENT ENTITIES AFFECTED BY THIS RULE:**

This rule will affect all electric utilities and their customers because the rule establishes the terms and conditions of net-metering service.

This rule will affect businesses that construct and install net-metering systems because it establishes application and siting criteria for such systems. Similarly, this rule will affect municipalities and regional planning commissions where net-metering systems are constructed. This rule will affect landowners and members of the public potentially affected by the construction of net-metering systems.

This rule will also affect the Vermont Department of Public Service, the Vermont Agency of Natural Resources, the Division for Historic Preservation, the Natural Resources Board, and the Agency of Agriculture Food and Markets because these agencies participate in the review of net-metering applications.

**16. BRIEF SUMMARY OF ECONOMIC IMPACT(150 WORDS OR LESS):**

The rule will have the following economic impacts:

1. The rule will result in costs and benefits that accrue to utilities and all of their customers, regardless of whether such customers net-meter. Overall, the rule will cause moderate costs to utilities because it requires utilities to purchase power from sources that are not least cost.
2. The rule will result in costs and benefits that accrue to net-metering customers, including residential customers and businesses.
3. The rule will result in costs and benefits that accrue to the general public, such as environmental costs and benefits.
4. The rule will affect businesses that sell and construct net-metering systems.

As discussed in more detail in the economic impact statement attached to the proposed rule, the Board has crafted the proposed rule to balance the costs and benefits of the net-metering program to the extent feasible. This

balancing is consistent with the requirements of 30 V.S.A. § 8010.

17. A HEARING WAS HELD.

18. HEARING INFORMATION

(THE FIRST HEARING SHALL BE NO SOONER THAN 30 DAYS FOLLOWING THE POSTING OF NOTICES ONLINE).

IF THIS FORM IS INSUFFICIENT TO LIST THE INFORMATION FOR EACH HEARING PLEASE ATTACH A SEPARATE SHEET TO COMPLETE THE HEARING INFORMATION.

Date: 11/15/2016

Time: 11:00 AM

Street Address: Capitol Plaza Hotel, 100 State Street, Montpelier, VT

Zip Code: 05602

Date:

Time: AM

Street Address:

Zip Code:

Date:

Time: AM

Street Address:

Zip Code:

Date:

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19. DEADLINE FOR COMMENT (NO EARLIER THAN 7 DAYS FOLLOWING LAST HEARING):

12/2/2016

20. KEYWORDS (PLEASE PROVIDE AT LEAST 3 KEYWORDS OR PHRASES TO AID IN THE SEARCHABILITY OF THE RULE NOTICE ONLINE).

Net-metering

distributed Generation

solar

wind

utilities

# Administrative Procedures – Adopting Page

## Instructions:

This form must be completed for each filing made during the rulemaking process:

- Proposed Rule Filing
- Final Proposed Filing
- Adopted Rule Filing
- Emergency Rule Filing

Note: To satisfy the requirement for an annotated text, an agency must submit the entire rule in annotated form with proposed and final proposed filings. Filing an annotated paragraph or page of a larger rule is not sufficient. Annotation must clearly show the changes to the rule.

When possible the agency shall file the annotated text, using the appropriate page or pages from the Code of Vermont Rules as a basis for the annotated version. New rules need not be accompanied by an annotated text.

1. TITLE OF RULE FILING:

5.100 Rule Pertaining to Construction and Operation of  
Net-Metering Systems

2. ADOPTING AGENCY:

Vermont Public Service Board

3. AGENCY REFERENCE NUMBER, IF ANY:

n/a

4. TYPE OF FILING (*PLEASE CHOOSE THE TYPE OF FILING FROM THE DROPDOWN MENU BASED ON THE DEFINITIONS PROVIDED BELOW*):

- **AMENDMENT** - Any change to an already existing rule, even if it is a complete rewrite of the rule, it is considered an amendment as long as the rule is replaced with other text.
- **NEW RULE** - A rule that did not previously exist even under a different name.
- **REPEAL** - The removal of a rule in its entirety, without replacing it with other text.

This filing is **AN AMENDMENT OF AN EXISTING RULE** .

5. LAST ADOPTED (*PLEASE PROVIDE THE SOS LOG#, TITLE AND LAST DATE OF ADOPTION FOR THE EXISTING RULE*):

REGULATIONS PERTAINING TO CONSTRUCTION AND OPERATION OF  
NET METERING SYSTEMS 13P028 January 27, 2014.



# Administrative Procedures – Economic Impact Statement

## Instructions:

In completing the economic impact statement, an agency analyzes and evaluates the anticipated costs and benefits to be expected from adoption of the rule. This form must be completed for the following filings made during the rulemaking process:

- Proposed Rule Filing
- Final Proposed Filing
- Adopted Rule Filing
- Emergency Rule Filing

Rules affecting or regulating public education and public schools must include cost implications to local school districts and taxpayers in the impact statement (see 3 V.S.A. § 832b for details).

The economic impact statement also contains a section relating to the impact of the rule on greenhouse gases. Agencies are required to explain how the rule has been crafted to reduce the extent to which greenhouse gases are emitted (see 3 V.S.A. § 838(c)(4) for details).

All forms requiring a signature shall be original signatures of the appropriate adopting authority or authorized person.

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**Certification Statement:** As the adopting Authority of this rule (see 3 V.S.A. § 801 (b) (11) for a definition), I conclude that this rule is the most appropriate method of achieving the regulatory purpose. In support of this conclusion I have attached all findings required by 3 V.S.A. §§ 832a, 832b, and 838(c) for the filing of the rule entitled:

**Rule Title: 5.100 Rule Pertaining to Construction and Operation of Net-Metering Systems**

\_\_\_\_\_, on \_\_\_\_\_.  
(signature) (date)

Printed Name and Title:

James Volz, Chair of the Public Service Board

*BE AS SPECIFIC AS POSSIBLE IN THE COMPLETION OF THIS FORM, GIVING FULL INFORMATION ON YOUR ASSUMPTIONS, DATABASES, AND ATTEMPTS TO GATHER OTHER INFORMATION ON THE NATURE OF THE COSTS AND BENEFITS INVOLVED. COSTS AND BENEFITS CAN INCLUDE ANY TANGIBLE OR INTANGIBLE ENTITIES OR FORCES WHICH WILL MAKE AN IMPACT ON LIFE WITHOUT THIS RULE.*

1. TITLE OF RULE FILING:

5.100 Rule Pertaining to Construction and Operation of Net-Metering Systems

2. ADOPTING AGENCY:

Vermont Public Service Board

3. CATEGORY OF AFFECTED PARTIES:

*LIST CATEGORIES OF PEOPLE, ENTERPRISES, AND GOVERNMENTAL ENTITIES POTENTIALLY AFFECTED BY THE ADOPTION OF THIS RULE AND THE ESTIMATED COSTS AND BENEFITS ANTICIPATED:*

The adoption of the proposed rule will affect all Vermont electric distribution utilities and their customers because the final proposed rule requires electric utilities to take power from net-metered generators. Net-metered power replaces power that utilities would otherwise purchase from other sources. As a result, utilities incur costs to acquire net-metered power but also receive benefits by avoiding power purchases, capacity charges, and line losses. Overall, the Board expects the adoption of the proposed rule to reduce the cost of net-metered power compared to the former net-metering program but anticipates that the final proposed rule will nonetheless continue to cause some amount of upward rate pressure for electric customers because the rule requires electric utilities to acquire power at prices that are greater than alternative sources of renewable energy.

Under 30 V.S.A. § 219a, which was repealed on January 1, 2017, customers participating in net-metering using photovoltaic systems received either 19 or 20 cents per kWh of energy produced by their system. Net-metering customers were also allowed to retain the renewable energy credits ("RECs") that are generated by the net-

metering system. These facets of the former net-metering program were powerful economic incentives to participate in net-metering. However, these economic incentives were offered at a cost to ratepayers because net-metered power costs more than alternative sources of renewable energy. For example, in the standard-offer program, developers of moderate-sized solar plants have expressed strong interest in securing long-term contracts under which they would sell energy, capacity, and RECs for 10.8 to 12 cents per kWh. Vermont utilities have recently developed moderate-sized solar projects at estimated costs well below 19 or 20 cents per kWh. These alternative sources of in-state renewable energy offer benefits similar to those provided by net-metered power, such as avoided energy costs, capacity charges, and line losses, but at a much lower cost. These incremental costs of net-metered power relative to these other sources of renewable energy are assumed by ratepayers.

The incentives described above have led to rapid growth of net-metering in Vermont – particularly due to the development of large solar net-metering projects that have been attracted by the premium rates offered under 30 V.S.A. § 219a. From 2014 to the end of 2015, permitted net-metering capacity in Vermont nearly doubled, with a particularly sharp spike in applications as Green Mountain Power Corporation (“GMP”) approached the statutory 15% capacity limit. For example, in a 30-day period from October to November of 2015, more than 27 MW of new, large solar net-metering projects applied for interconnection in the service territory of GMP. As a result, GMP’s program exceeded the statutory limit on net-metering capacity and was closed to projects greater than 15 kW.

Assuming that the approximately 172 MW of net-metering systems that have been permitted to date are installed, the Board estimates that these systems will cost Vermont ratepayers approximately \$21,000,000 per year more than if this power had been supplied by

competitively priced standard-offer projects. This estimate assumes a price differential of 7 cents per kWh. This estimate also assumes that net-metering customers choose to retain RECs and that the replacement cost of such RECs is 3 cents per kWh. This estimate is conservative because past experience indicates that the cost of renewable energy resources, particularly solar, will continue to decline. It is also worth noting that standard-offer contracts have fixed prices for a term of 25 years. In contrast, net-metering prices will likely increase in the future because residential rates tend to increase over time.

The purpose of this comparison is not to suggest that Vermont should, or could, procure all of its renewable power from standard-offer plants or any other particular source, but instead is meant to show the additional cost to ratepayers when power is procured from a source that is not least-cost. To the extent that other sources of energy or energy efficiency cost less than standard-offer resources, the comparative additional cost to ratepayers of net-metered power is greater than described above.

As a result of the costs described above, the former net-metering program has begun to create upward rate pressure for Vermont utilities. For example, GMP has represented that net-metering will cause a 1.5% upward rate impact for its customers in the 2016-2017 rate year. Similarly, the Vermont Electric Cooperative has estimated that, if built, the net-metering systems authorized under Section 219a would have a 3.2% rate impact on its customers.

For these reasons, the Board has designed the proposed rule to better balance the costs and benefits of the net-metering program, to reduce cost shifts between customers who net-meter and those who do not, and to minimize undue rate impacts, consistent with the requirements of 30 V.S.A. § 8010. The proposed rule

reduces the cost of solar net-metered power from 19 or 20 cents per kWh to a range of approximately 9 to 19 cents per kWh, depending on the characteristics of net-metering systems and the products they provide to their utility. This reduction in the cost of net-metered power will reduce the potential rate impact of the net-metering program. The proposed rule is also designed to ensure that RECs generated by net-metering systems are retired by utilities to support Vermont's Renewable Energy Standard. Finally, the proposed rule has been designed to reduce cost shifts between customers who net-meter and those who do not by requiring all customers to pay for customer-related expenses that do not vary with electricity consumption.

The proposed rule still requires Vermont utilities to pay for net-metered power at prices that will likely exceed the cost of alternative sources of renewable energy. At the rates provided in this rule, the Board estimates that the cost of net-metered power will be approximately 5 cents per kWh more expensive than other alternative sources of renewable energy. Given this assumption, each 10 MW of capacity installed under this rule will result in an additional annual cost to ratepayers of approximately \$613,000. This calculation assumes that the program continues to be dominated by solar facilities operating at a capacity factor of 14 percent.

The actual differential between the cost of net-metered power and alternative sources, and therefore the cost of the net-metering program to ratepayers, will depend on the location and size of net-metering systems installed, whether customers elect to retain or transfer RECs, and future prices of alternative sources. The Board has designed the proposed rule to allow the Board to periodically review and adjust the costs of the program over time in order to reflect future changes in circumstances and to prevent undue rate impacts.

The proposed rule will affect customers using net-metering systems. As discussed above, the rule will reduce the amount of economic incentives provided to new net-metering customers. Additionally, new net-metering customers will not be able to offset non-bypassable charges, such as the universal customer charge and the energy efficiency charge, with accrued net-metering credits. These charges vary, depending on the customer's utility and consumption. (For example, GMP's customer charge is 43 cents per day.) Pursuant to Section 5.124 of the proposed rule, pre-existing customers are exempt from these aspects of the proposed rule for a period of 10 years. However, pre-existing net-metering customers will be affected by these aspects of the rule after that period ends.

The proposed rule will continue to result in economic benefits to the state and its residents as a result of the development of net-metering projects. Businesses that sell and install net-metering projects contribute to the state economy through the creation of jobs and payment of taxes. The recent Vermont Clean Energy 2016 Industry Report states that solar development supports approximately 2,100 jobs in Vermont. Some portion of this figure is attributable directly to net-metering, which is predominated by solar installations. However, this report also states that only 4.3 percent of renewable energy firms indicated that net-metering policies contributed to their success in 2016. In contrast, these firms indicated that Vermont's renewable energy standard and tax policies were more significant drivers of their success.

With this context in mind, the Board anticipates that the rule will have a modest economic impact on businesses that sell and install small net-metering systems. The proposed rule maintains economic incentives for small net-metering systems (the kind used by homeowners and small businesses). For example, a homeowner installing a 10 kW net-metering system under the proposed rule would be eligible to receive

net-metering credits worth approximately 19 cents per kWh, which is above the blended residential retail rate for electricity. This represents a slight reduction (one penny) in the value of a net-metering credit when compared to the former net-metering statute. The homeowner would also be required to pay any applicable non-bypassable charges. Under these circumstances, the Board anticipates continued growth in the use of small net-metering systems and modest economic impacts to firms that focus on these systems.

The proposed rule will have a greater effect on the development of large net-metering systems (those greater than 150 kW) because these systems will receive less compensation than under the former net-metering program. The Board anticipates that businesses focused on large net-metering systems will develop fewer of these projects. However, the Board concludes that this reduction in the pace of development will not impede progress toward achieving Vermont's renewable energy goals. Pursuant to Vermont law, electric utilities are required to obtain a certain amount of power and RECs from small, in-state renewable generators (Tier II of Vermont's Renewable Energy Standard). The Board estimates that the Vermont distribution utilities will need to obtain approximately 10 MW of solar capacity per year to meet their Tier II requirements. Other options for satisfying Tier II include either contracting with or constructing renewable generators of up to 5 MW in capacity. Businesses that were previously focused on developing large net-metering systems may be able to adjust their business models to develop renewable generation plants that are needed to satisfy Vermont's Tier II requirements. Moreover, it is important to recognize that the reduced value of net-metering credits offered to large net-metering systems will simultaneously create savings for ratepayers that will mitigate the economic impacts described above.

The proposed rule will have a small economic impact on citizens, municipalities, and regional planning commissions that participate in the review of net-metering applications. The rule has been designed to simplify the review process and ease public participation in Board proceedings. However, there is an economic cost to individuals who choose to participate in the review of net-metering CPG applications, either through the time such individuals invest in participating in such cases or the cost to hire counsel. Based on the Board's experience with such proceedings, the cost to participate in a contested net-metering application may be material for an individual, depending on that individual's resources. However, in the Board's experience, the majority of controversial net-metering proposals were large solar arrays located on undeveloped land. The Board has designed the proposed rule to incentivize the beneficial siting of net-metering systems. For example, the rule requires large net-metering systems to be located on areas designated as "preferred sites." Therefore, the Board anticipates fewer contested net-metering applications under the proposed rule. Accordingly, The Board estimates that the economic costs associated with the public participating in the review of net-metering projects under the proposed rule will not be significant on a state-wide basis.

Finally, the proposed rule will also result in costs for the Vermont Department of Public Service, the Vermont Agency of Natural Resources, the Division for Historic Preservation, the Natural Resources Board, and the Agency of Agriculture Food and Markets because these agencies will participate in the review of net-metering applications. The Board anticipates that these costs will be less than under the former net-metering program because the Board anticipates fewer controversial applications for large net-metering systems, which typically have required the most resources to review.

#### 4. IMPACT ON SCHOOLS:



*INDICATE ANY IMPACT THAT THE RULE WILL HAVE ON PUBLIC EDUCATION, PUBLIC SCHOOLS, LOCAL SCHOOL DISTRICTS AND/OR TAXPAYERS:*

Public schools will have the opportunity to participate in the net-metering program and thereby offset some or all of a school's purchases of electricity from its local utility.

#### 5. COMPARISON:

*COMPARE THE ECONOMIC IMPACT OF THE RULE WITH THE ECONOMIC IMPACT OF OTHER ALTERNATIVES TO THE RULE, INCLUDING NO RULE ON THE SUBJECT OR A RULE HAVING SEPARATE REQUIREMENTS FOR SMALL BUSINESS:*

Section 8010(c) of Title 30 requires the Public Service Board to establish rules governing the installation and operation of net-metering systems. In developing the proposed rule, the Board considered several potential alternative rate structures for net-metering: (1) a continuation of the former net-metering program; (2) retail rate net-metering; and (3) a value model.

As discussed above, customers using photovoltaic systems received either 19 or 20 cents per kWh of energy produced under the former net-metering program. This rate structure was expensive and has resulted in upward rate pressure on electric customers. Because of significant reductions in the cost of solar technology and because of the declining value offered by the construction of additional solar in Vermont, the rates provided by Section 219a now provide an excessive economic incentive to develop solar net-metering systems. Accordingly, the Board has determined that the net-metering program should be revised in a manner that reduces the amount of economic incentives provided to net-metering customers so that such incentives do not shift costs from customers who net-meter to those who do not.

Retail rate net-metering involves crediting net-metering customers at their applicable retail rate. This model differs from the proposed rule in that retail rate net-metering is not tailored to incentivize desired behavior--such as building net-metering systems

on roofs instead of greenfields. In comparison to the proposed rule, retail rate net-metering would likely result in greater costs to Vermont and its residents over the long term. The proposed rule offers initial economic incentives that in some cases exceed the retail rate, but the rule also provides for biennial update proceedings whereby the Board can taper any economic incentives if the price of technology changes over time. For example, the price of solar technology has declined significantly since the beginning of the net-metering program. The Board expects some further reduction in price to continue. Therefore, the Board anticipates that the rule will reduce the cost of net-metered power in the long-term as compared to a pure retail-rate structure.

A value model involves calculating the value of the products generated by a net-metering system and using that value to set the compensation level for net-metering customers. While some participants in the Board's workshop process advocated for this rate structure, the Board was not able to develop, and no participant proposed, a workable model for calculating the value of power produced by net-metering systems that changes over time.

## 6. FLEXIBILITY STATEMENT:

*COMPARE THE BURDEN IMPOSED ON SMALL BUSINESS BY COMPLIANCE WITH THE RULE TO THE BURDEN WHICH WOULD BE IMPOSED BY ALTERNATIVES CONSIDERED IN 3 V.S.A. § 832a:*

Pursuant to 3 V.S.A. § 832a(a), the Board must "consider ways by which a small business can reduce the cost and burden of compliance by specifying less numerous, detailed or frequent reporting requirements, or alternative methods of compliance." The rule does not impose frequent or detailed reporting requirements on small businesses.

Pursuant to 3 V.S.A. § 832a(b), the Board must "consider creative, innovative, or flexible methods of compliance with the rule" to the extent that the Board finds, in writing, that such action would not significantly reduce the effectiveness of the rule, be inconsistent with the statutes implemented by the rule, or increase risks to the public. Compliance with the proposed rule is the most appropriate way to ensure that net-metering systems meet the requirements of 30 V.S.A. §§ 248 and 8010. These statutes require net-metering systems to be constructed and operated without undue adverse effect on the natural environment.

7. **GREENHOUSE GAS IMPACT: EXPLAIN HOW THE RULE WAS CRAFTED TO REDUCE THE EXTENT TO WHICH GREENHOUSE GASES ARE EMITTED, EITHER DIRECTLY OR INDIRECTLY, FROM THE FOLLOWING SECTORS OF ACTIVITIES:**

a. **TRANSPORTATION —**

*IMPACTS BASED ON THE TRANSPORTATION OF PEOPLE OR PRODUCTS (e.g., "THE RULE HAS PROVISIONS FOR CONFERENCE CALLS INSTEAD OF TRAVEL TO MEETINGS" OR "LOCAL PRODUCTS ARE PREFERENTIALLY PURCHASED TO REDUCE SHIPPING DISTANCE."):*

The construction of net-metering systems will result in limited greenhouse gas impacts due to the transportation of materials and workers to construction sites. The rule provides an economic incentive for electricity customers to produce electricity using renewable resources and potentially displace the use of fossil fuels, thereby reducing greenhouse gas impacts generally.

b. **LAND USE AND DEVELOPMENT —**

*IMPACTS BASED ON LAND USE AND DEVELOPMENT, FORESTRY, AGRICULTURE ETC. (e.g., "THE RULE WILL RESULT IN ENHANCED, HIGHER DENSITY DOWNTOWN DEVELOPMENT." OR "THE RULE MAINTAINS OPEN SPACE, FORESTED LAND AND/OR AGRICULTURAL LAND."):*

The rule establishes incentives to encourage the siting of net-metering systems on existing structures, brownfields, parking lots, and gravel pits rather than on greenfields, forested land, or agricultural lands. Accordingly, the rule is designed to reduce the land-use impacts attributed to the construction of net-metering systems.

c. **BUILDING INFRASTRUCTURE —**

*IMPACTS BASED ON THE HEATING, COOLING AND ELECTRICITY CONSUMPTION NEEDS (e.g., "THE RULE PROMOTES WEATHERIZATION TO*

*REDUCE BUILDING HEATING AND COOLING DEMANDS.” OR “THE PURCHASE AND USE OF EFFICIENT ENERGY STAR APPLIANCES IS REQUIRED TO REDUCE ELECTRICITY CONSUMPTION.”):*

The rule promotes the construction and installation of net-metering systems that can reduce the state's reliance on externally sourced and fossil-fueled energy sources. The rule also encourages the development of small, distributed generation that can help to alleviate congestion and strain on the grid.

d. **WASTE GENERATION / REDUCTION —**

*IMPACTS BASED ON THE GENERATION OF WASTE OR THE REDUCTION, REUSE, AND RECYCLING OPPORTUNITIES AVAILABLE (e.g., “THE RULE WILL RESULT IN REUSE OF PACKING MATERIALS.” OR “AS A RESULT OF THE RULE, FOOD AND OTHER ORGANIC WASTE WILL BE COMPOSTED OR DIVERTED TO A ‘METHANE TO ENERGY PROJECT’.”):*

The construction of net-metering systems will produce only a limited amount of waste. Systems over 150 kW in size will be required to submit a decommissioning plan.

e. **OTHER —**

*IMPACTS BASED ON OTHER CRITERIA NOT PREVIOUSLY LISTED:*

Net-metering systems are renewable energy generators, the use of which has the potential to reduce the amount of greenhouse gas created during the generation of electricity.

# Administrative Procedures – Public Input Statement

## Instructions:

In completing the public input statement, an agency describes what it did do, or will do to maximize the involvement of the public in the development of the rule. This form must be completed for the following filings made during the rulemaking process:

- Proposed Rule Filing
- Final Proposed Filing
- Adopted Rule Filing
- Emergency Rule Filing

1. TITLE OF RULE FILING:

5.100 Rule Pertaining to Construction and Operation of Net-Metering Systems

2. ADOPTING AGENCY:

Public Service Board

3. PLEASE LIST THE STEPS THAT HAVE BEEN OR WILL BE TAKEN TO MAXIMIZE PUBLIC INVOLVEMENT IN THE DEVELOPMENT OF THE PROPOSED RULE:

Act 99 directed the Board to “convene one or more workshops to solicit the input of potentially affected parties and the public on the design of a revised net metering program.” The Board held a preliminary workshop on November 5, 2014, to discuss the Vermont Department of Public Service’s report evaluating the state of net-metering in Vermont. Additionally, the Board requested comment on what process to follow to solicit input from potentially affected stakeholders designing a revised net-metering program. The Board also sought two rounds of written comments to inform how the Board should garner public input.

Based on the feedback received at the preliminary workshop and in written comments, the Board formed three working groups to explore specific aspects of a revised net-metering program: rate structure, administrative processes, and interconnection. The Board subsequently held 13 working group meetings from February 2015 through May 2015. A website was maintained to facilitate access to the materials

presented at these meetings and to provide information about future meetings.

The Board solicited public comments and proposed rule language on June 12, 2015, and another round of comments on July 10, 2015, prior to drafting revisions to the Board's net-metering rule. On December 8, 2015, the Board circulated a proposed draft rule with the working group participants and solicited comments on the draft.

In response to the first draft of the rule, the Board received substantial feedback from the public. These comments raised significant issues about how the draft rule would affect net-metering customers, ratepayers, and businesses that install net-metering systems. The Board subsequently published another draft of the rule on February 19, 2016. Again the public was invited to comment on the revised draft rule text.

The Board filed a proposed a net-metering rule with the Vermont Secretary of State on March 30, 2016. The public was invited to comment on the proposed rule and the Board conducted two public hearings on May 4 and 5, 2016. The public submitted more than 500 comments on the proposed rule. This feedback again brought new issues to the Board's attention that had not yet been fully considered. For example, the rapid growth of net-metering systems in 2015 and 2016 had prompted new concerns about the costs of the net-metering program. Additionally, the passage of Act 174 of 2016 led the Board to consider whether the net-metering rule was consistent with the Legislature's desire to ease public participation in Board proceedings.

As a result, the Board determined that further significant revisions to the text of the rule were necessary. These changes were substantive and therefore could not be incorporated into a final rule without additional public process. Accordingly, to ensure that Vermont's net-metering program would serve the best interests of the state and its residents, the Board filed a new proposed rule, as opposed to adopting a final rule.

Act 99 provides that in the event that the Board is unable to finally adopt a revised net-metering rule prior to June 30, 2016, the Board has the authority to temporarily adopt a revised net-metering program by order, to be followed by a rulemaking within a reasonable timeframe. On June 29, 2016, the Board issued an order establishing a revised net-metering program because the Board was unable to adopt a final rule prior to the statutory deadline of June 30, 2016. As part of the June 29th order, the Board invited the public to file comments on the revised net-metering program. On August 29, 2016, the Board issued an order instituting certain changes to the net-metering program that were made in response to these comments. The Board took these steps to ensure that there would be a functional net-metering program in effect on January 1, 2017, while at the same time providing an opportunity for additional public input and to improve the design of the program.

The Board then filed a new proposed rule with the Secretary of State on October 15, 2016. The public was provided an opportunity to comment and a public hearing was held on November 18, 2016. After reviewing these comments, the Board made additional changes to the rule and filed the final proposed rule with the Legislative Committee on Administrative Rules on January 20, 2017.

4. BEYOND GENERAL ADVERTISEMENTS, PLEASE LIST THE PEOPLE AND ORGANIZATIONS THAT HAVE BEEN OR WILL BE INVOLVED IN THE DEVELOPMENT OF THE PROPOSED RULE:

The following individuals and groups participated in the workshops held by the Board pursuant to Act 99 of 2014:

- Carolyn Alderman, Vermont Electric Power Producers
- Charlotte Ancel, Esq., Green Mountain Power Corporation
- Carolyn Anderson, Esq., Green Mountain Power Corporation
- Scott Anderson, Green Mountain Power Corporation
- Melissa Bailey, Vermont Public Power Supply Authority

- Gene Bertsche, American Clean Energy Supply
- David Blittersdorf, All Earth Renewables
- Ansley Bloomer, Renewable Energy Vermont
- Dave Bonta, USA Solar Store
- Alex Bravakis, Novus Energy Development, LLC
- Victoria Brown, Esq., Vermont Electric Cooperative
- Brian Browning, Solar Power Engineering
- Leslie Cadwell, Esq., Legal Counselor and Advocate, PL
- Billy Coster, Vermont Agency of Natural Resources
- Jason Day, Star Wind Turbines
- Alex DePilllis, Vermont Agency of Agriculture, Food, and Markets
- Meghan Dewald, All Earth Renewables
- Joshua Diamond, Esq., on behalf of Washington Electric Cooperative
- Judith Dillon, Esq., Vermont Agency of Natural Resources
- Tim Duggan, Esq., Vermont Department of Public Service
- Jeanne Elias, Esq., Vermont Department of Public Service
- William Ellis, Esq., on behalf of Burlington Electric Department
- Shawn Enterline, Green Mountain Power Corporation
- Steve Farman, Vermont Public Power Supply Authority
- Andrew Flagg, Vermont Public Service Board
- Sean Foley, Vermont Department of Public Service
- David Forrest, ISO-New England
- Phillip Foy, Encore Redevelopment
- Deena Frankel, Vermont Electric Power Company
- Liz Gamache, Vermont Electric Cooperative
- Tom Garden, Triland Partners



- John Gerhard, Esq., Vermont Public Service Board
- Charles Grant, Essex Capital Partners
- Geoffrey Hand, Esq., Dunkiel, Saunders, Elliot, Raubvogel, & Hand
- Scott Harding, Vermont Electric Power Company
- Cindy Ellen Hill, Town of New Haven, Vermont
- David Hill, Vermont Energy Investment Corporation
- Asa Hopkins, Vermont Department of Public Service
- Adam Hottell, Stateside Associates
- Dan Ingold, PowerSmith
- Craig Kieny, Vermont Electric Cooperative
- Kate Kroll, Renewable Energy Vermont
- Sandra Levine, Esq., Conservation Law Foundation
- Timothy Maker, Community Biomass Systems
- Anne Margolis, Vermont Department of Public Service
- Jake Marren, Esq., Vermont Public Service Board
- Melissa Martin, Stateside Associates
- Johanna Miller, Vermont Natural Resources Council
- James Moore, SunCommon
- Derek Moretz, Encore Redevelopment
- Lisa Morris, Vermont Electric Cooperative
- David Mullett, Esq., Vermont Public Power Supply Authority
- Ken Nolan, Burlington Electric Department
- Andrew Perchlik, Vermont Department of Public Service
- Kevin Perry, Vermont Electric Cooperative
- Nathan Phelps, Vote Solar
- Walter Poor, Vermont Department of Public Service
- William Powell, Washington Electric Cooperative
- Bridgette Remington, Esq., Legal Counselor and Advocate, PL
- Patricia Richards, Washington Electric Cooperative

- Andrew Savage, All Earth Renewables
- Amanda Simard, Vermont Public Power Supply Authority
- Hannah Smith, Esq., Tarrant, Gillies, & Richardson
- Kris Smith, Vermont Electric Cooperative
- Stephanie Smith, Vermont Agency of Agriculture, Food & Markets
- Allan St.Peter, Vermont Department of Public Service
- Martha Staskus, VERA Renewables
- Gabrielle Stebbins, Renewable Energy Vermont
- Matthew Stern, Esq., Gravel & Shea
- Melissa Stevens, Green Mountain Power Corporation
- Jesse Stowell, Sun Edison
- Heidi Trimarco, Esq., Downs Rachlin Martin PLLC
- Dan Tukey, International Business Machines
- Nathaniel Vandal, Green Peak Solar
- Thomas Weiss, Net-Metered System Owner
- Joseph Wiedman, Esq., Keyes, Fox, and Weidman LLP
- Jonathan Willson, Vermont Law School
- Katrina Wilson, Integrated Solar
- John Woodward, Vermont Public Service Department
- Po-Yu Yuen, Sustainable Energy Advantage, LLC
- Dylan Zwicky, VPIRG

# **Administrative Procedures – Scientific Information Statement**

## **Instructions:**

In completing the Scientific Information Statement, an agency shall provide a brief summary of the scientific information including reference to any scientific studies upon which the proposed rule is based, for the purpose of validity.

This form is only required when a rule relies on scientific information for its validity.

1. TITLE OF RULE FILING:
  
2. ADOPTING AGENCY:
  
3. BRIEF EXPLANATION OF SCIENTIFIC INFORMATION:
  
4. CITATION OF SOURCE DOCUMENTATION OF SCIENTIFIC INFORMATION:
  
5. INSTRUCTIONS ON HOW TO OBTAIN COPIES OF THE SOURCE DOCUMENTS OF THE SCIENTIFIC INFORMATION FROM THE AGENCY OR OTHER PUBLISHING ENTITY:

# Administrative Procedures – Incorporation by Reference Statement

## Instructions:

In completing the incorporation by reference statement, an agency describes any materials that are incorporated into the rule by reference and why the full text was not reproduced within the rule.

This form is only required when a rule incorporates materials by referencing another source without reproducing the text within the rule itself (e.g. federal or national standards, or regulations).

Copies of incorporated materials will be held by the Office of the Secretary of State until adoption or formal withdrawal of the rule is complete. Materials will be returned to the agency upon completion of the rule.

All forms requiring a signature shall be original signatures of the appropriate adopting authority or authorized person.

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**Certification Statement:** As the adopting Authority of this rule (see 3 V.S.A. § 801 (b) (11) for a definition), I certify that the text of the matter incorporated has been reviewed by an official of the agency. I further certify that the agency has the capacity and intent to enforce the rule entitled:

## **Rule Title:**

\_\_\_\_\_, on \_\_\_\_\_.  
(signature) (date)

Printed Name and Title:

1. TITLE OF RULE FILING:
  
2. ADOPTING AGENCY:
  
3. DESCRIPTION (*DESCRIBE THE MATERIALS INCORPORATED BY REFERENCE*):
  
4. OBTAINING COPIES: (*EXPLAIN HOW THE MATERIAL(S) CAN BE OBTAINED BY THE PUBLIC, AND AT WHAT COST*):
  
5. MODIFICATIONS (*PLEASE EXPLAIN ANY MODIFICATION TO THE INCORPORATED MATERIALS E.G., WHETHER ONLY PART OF THE MATERIAL IS ADOPTED AND IF SO, WHICH PART(S) ARE MODIFIED*):
  
6. REASONS FOR INCORPORATION BY REFERENCE (*EXPLAIN WHY THE AGENCY DECIDED TO INCORPORATE THE MATERIALS RATHER THAN REPRODUCE THE MATERIAL IN FULL WITHIN THE TEXT OF THE RULE*):
  
7. THE INCORPORATED MATERIALS HAVE BEEN REVIEWED BY THE FOLLOWING OFFICIAL OF THE AGENCY:
  
8. THE ADOPTING AGENCY REQUESTS THAT ALL COPIES OF INCORPORATED MATERIALS BE RETURNED TO THE AGENCY .

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