

STATE OF VERMONT  
PUBLIC SERVICE BOARD

Docket No. 7873

Programmatic Changes to the Standard-Offer Program )

Docket No. 7874

Investigation into the Establishment of Standard-Offer )  
Prices under the Sustainably Priced Energy Enterprise )  
Development ("SPEED") Program )

Order entered: 2/12/2016

**ORDER RE STANDARD OFFER PROGRAM TECHNOLOGY ALLOCATION**

**I. INTRODUCTION**

Pursuant to 30 V.S.A. § 8005a, the Vermont Public Service Board (“Board”) is directed to implement a standard-offer program for eligible new renewable energy plants until a cumulative plant capacity amount of 127.5 MW is reached. Section 8005a(c)(2) requires the Board to allocate the 127.5 MW cumulative capacity of the standard-offer program among different categories of renewable energy technologies, including methane derived from a landfill; solar power; wind power with a plant capacity of 100 kW or less; wind power with a plant capacity greater than 100 kW; hydroelectric power; and biomass power using a fuel other than methane derived from an agricultural operation or landfill. The Board has endeavored throughout the course of its implementation of the standard-offer program to make capacity within the program available to new standard-offer plants from each of these technology categories while also being mindful of the statutory directive of ensuring timely development at the lowest feasible cost.<sup>1</sup> In this Order, the Board establishes a mechanism for the allocation of available capacity for the remainder of the standard-offer program established under 30 V.S.A. § 8005a.

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1. 30 V.S.A. § 8005a(f).

## **II. BACKGROUND AND PROCEDURAL HISTORY**

Pursuant to 30 V.S.A. §§ 8005a, the Board shall issue standard offers for renewable energy plants that meet certain eligibility requirements until a cumulative plant capacity amount of 127.5 MW is reached pursuant to a predetermined schedule. The Board is further required to allocate the 127.5 MW cumulative plant capacity among different categories of renewable energy technologies, including at least: methane derived from a landfill; solar power; wind power with a plant capacity of 100 kW or less; wind power with a plant capacity greater than 100 kW; hydroelectric power; and biomass power using a fuel other than methane derived from an agricultural operation or landfill.

On September 30, 2009, the Board issued an Order implementing the original 50 MW standard-offer program. In that Order, the Board established a mechanism to ensure a diversity of resources in the standard-offer program. Accordingly, the Board directed that no more than 25% of the standard-offer program be filled by any one technology.<sup>2</sup>

On June 24, 2010, the Board issued an Order concluding that the previously established technology caps should remain in place at least through October 31, 2010, in order to allow an opportunity for a diversity of commissioned resources.<sup>3</sup>

On October 29, 2010, the Board issued an Order concluding that it was appropriate for the technology caps to remain in place through May 31, 2011.

On June 3, 2011, the Board issued an Order removing the technology caps, concluding that because the technology caps had been in place since September 30, 2009, because there were projects in each technology category, and because the full 50 MW of the standard-offer program's capacity had not been awarded, it was appropriate for the statutory goal of rapid deployment to take precedence over technological diversity. Therefore, the Board directed the Standard Offer Facilitator to admit projects on the solar and wind standard-offer waiting lists into the program on an alternating basis.<sup>4</sup>

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2. *Investigation re: Establishment of a Standard-Offer Program for Qualifying Sustainably Priced Energy Enterprise Development ("SPEED") Resources*, Docket No. 7533, Order of 9/30/09 at 15.

3. Docket No. 7533, Order of 6/24/10 at 4.

4. Docket No. 7533, Order of 6/3/11 at 4.

On June 27, 2011, the Board issued an Order clarifying its Order of June 3, 2011.

On March 1, 2013, the Board issued an Order implementing significant changes to the standard-offer program required by Public Act 170 ("March 1 Order").<sup>5</sup> In the March 1 Order, pursuant to Section 8005a(f), the Board established a request for proposals ("RFP") mechanism for new standard-offer projects, for effect on April 1, 2013, and each following April 1, and established avoided costs to serve as caps on the standard-offer prices solicited through the RFP.

On February 7, 2014, the Board issued an Order in which it declined to establish a minimum technology allocation for the standard-offer projects solicited through the 2014 RFP. The Board stated that it would conduct an additional proceeding following the 2014 RFP process to investigate the establishment of a minimum technology allocation.

On February 17, 2015, the Board issued an Order establishing a minimum technology allocation for the standard-offer projects solicited through the 2015 RFP and adding food waste anaerobic digestion as a technology category to the definition of renewable energy. Accordingly, for the 2015 RFP, a technology allocation of 1.5 MW was set aside for small wind and food waste anaerobic digestion, with each technology receiving a 500 kW minimum allocation and a maximum allocation of 1 MW. The additional 500 kW not specifically reserved for either category was to be allocated based on bid price. Any unused capacity within the 1.5 MW allocation was to be reallocated based on bid price to any remaining 2015 RFP bids outside of these two technology categories.

On October 1, 2015, the Board issued a memorandum seeking comments regarding a technology allocation methodology for the 2016 RFP.

On October 26, 2015, comments addressing the issue of technology allocation were filed by the Vermont Department of Public Service ("Department"), Renewable Energy Vermont ("REV"), Green Mountain Power Corporation ("GMP"), the Vermont Agency of Agriculture, Food, and Markets ("AAFV"), and Star Wind Turbines, LLC ("Star Wind").

On October 30, 2015, a workshop was convened to discuss technology allocation recommendations.

On November 9, 2015, VEPP Inc. ("VEPPI") filed additional comments.

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5. Docket Nos. 7873 & 7874, Order of 3/1/13.

On December 9, 2015, Vermont Public Power Supply Authority (“VPPSA”) and the Department each filed additional comments.

### **III. PARTICIPANTS' COMMENTS**

#### *The Department*

The Department observes that in 2013 and 2014 the entire 5 MW of available capacity was awarded to solar projects. In 2015, the Department notes, the Board awarded capacity to small wind projects and food-waste anaerobic digestion projects, yet solar continues to be the dominant technology within the standard-offer program. The Department contends that if the current technology allocation scheme is continued, solar projects are likely to account for three quarters or more of the cumulative program capacity. Therefore, the Department states that it has considered what type of technology allocation scheme would balance the statutory goals of “ensuring timely development at the lowest feasible cost”<sup>6</sup> and promoting the inclusion of “renewable energy plants that are diverse in plant capacity and type of renewable energy technology.”<sup>7</sup>

In its October 27, 2015, comments, the Department proposed two technology allocation concepts for the purpose of promoting dialogue. Under the first concept, a fixed share of each annual allotment would be reserved for non-solar technologies (“Concept 1”). For example, if the non-solar technology share were set at 40%, in years when the allotment is 7.5 MW, the non-solar technology share would be 3 MW. Within the non-solar technology set-aside, each non-solar project would bid against the other non-solar projects until the full amount of the set-aside had been allocated, and any unbid capacity would be allocated to the lowest-priced bids from the remaining pool of solar projects that were not awarded contracts under the annual allotment for solar projects.

Under the Department’s second concept, at least 1 MW of capacity would be set aside for each technology group in each annual RFP (“Concept 2”). Within each 1 MW technology-

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6. 30 V.S.A. § 8005a(f).

7. 30 V.S.A. § 8001(a)(8).

specific set-aside, awards would be determined by the submitted bid prices. For 2016-2018, when the annual available capacity is 7.5 MW, the Department proposes that the remaining 500 kW of capacity that has not been set aside for technology-specific bidding would be allocated to any technology on the basis of bid price alone. Similarly, any unbid capacity within technology-specific set-asides would then be allocated to any technology on the basis of bid price alone. For 2019-2021, when the annual available capacity is 10 MW, the Department proposes that the remaining 3 MW that has not been set aside for technology-specific bidding would be allocated to any technology on the basis of bid price alone.

Under either of its technology allocation concepts, the Department contends that it would be worthwhile to consider restricting some or all of the bidding from the solar technology group to projects that are developed on favorable sites that are already part of the built environment.

In its December 9, 2015, comments, the Department proposed a third technology allocation concept (“Concept 3”). The Department characterizes Concept 3 as a “revolving set aside” wherein each year one-third of the annual available capacity would be set aside for the non-solar technology that to date has been awarded the least amount of capacity, calculated as a percent of the total awarded capacity in the program (excluding farm methane projects). Under this scheme, in 2016 the set-aside would be 2.5 MW and the capacity would be reserved for bids from the large wind category. In the event that there are less than 2.5 MW of accepted bids for this technology category, the Department proposes that all unbid capacity from the 2.5 MW set-aside be allocated to the technology with the second-least amount of awarded capacity. This process would continue until all available capacity within the set-aside is awarded. In the event that all non-solar technology bids are accepted and capacity within the set-asides remains, the Department suggests that any remaining capacity be made available to solar. The Department notes that if this Concept 3 technology allocation methodology is adopted, it will be important to have up-to-date price cap calculations for all non-solar technologies.

The Department also proposes an allocation for bids from non-greenfield solar developers, with as much as one-third of the annual available capacity reserved for solar projects on “preferred sites” — such as rooftops, gravel pits, quarries, landfills, brownfields, and parking lots — that would be subject to a unique price cap. In the event that any of this preferred-site

solar set-aside is not awarded, the Department recommends that the remainder be allocated on a lowest-price basis regardless of technology.

The Department recommends that neither the Concept 3 nor the preferred site set asides be applied to the Provider Block.<sup>8</sup>

#### *REV*

REV suggests that the technology allocations for 2016 be consistent with those established for the 2015 RFP in order to allow for a more robust data set to assess whether future changes in technology allocation should be made. REV argues that market stability and consistency are necessary for the market-based RFP mechanism to produce lower bids.

#### *GMP*

GMP supports a limited technology allocation to encourage source diversity within the standard-offer program. GMP recommends a non-solar allocation of up to 2 MW, with a maximum allocation of 500 kW for any technology, with any unused capacity allocated to any technology on the basis of bid price alone. In addition, GMP proposes that a portion of the 2 MW allocation, or a separate allocation of up to 500 kW, be set aside for rooftop solar projects in order to encourage the development of alternate siting opportunities for this technology. GMP observes that if a rooftop solar category is established, it may be appropriate to also establish an avoided-cost cap for this category to account for the unique costs and characteristics associated with this type of project.

#### *AAFM*

AAFM concurs with the Department's concepts, and proposes a variation on Concept 2. Whereas under the Department's Concept 2 any unbid capacity within technology-specific set-asides would be allocated to any technology on the basis of bid price alone, AAFM suggests that

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8. Each year a portion of the annual capacity increase is reserved for new standard-offer plants proposed by Vermont retail electric providers. For the three years commencing April 1, 2013, the portion was 10%. Beginning in 2016 the portion will be 15%, and in 2019 the portion will be 20%.

any unbid capacity could be allocated for solar projects “developed on favorable sites that are already part of the built environment” prior to allocating that capacity to solar projects on farm land, despite what may or may not be a higher price. AAFM notes that it considers a farmstead and its buildings to be part of the built environment. In addition, AAFM supports retaining a technology allocation for small wind.

#### *Star Wind*

Star Wind recommends that the small wind allocation from the 2015 RFP (500 kW) be expanded in proportion to the standard-offer program expansion, suggesting that small wind receive an allocation of 700 kW. In support of its recommendation, Star Wind notes that in 2015 small wind projects filled the allocation and suggests that the current avoided-cost cap of \$0.253/kWh is adequate to attract bidders. Star Wind further recommends allocations of 700 kW for both “non-solar PV” and “methane.”

#### *VEPPI*

VEPPI states that it offered suggestions to the Board in 2014, including encouragement to consider different types of solar projects through specific set-asides and price caps — such as for rooftop solar — that may compete for a standard offer. VEPPI notes that the technology price cap must be high enough to support this type of project and must be at least \$0.19/kWh to compete with the net metering program.

#### *VPPSA*

VPPSA supports implementation of a non-solar technology set-aside and suggests that a percentage of the 2016 allocation of 7.5 MW be reserved for the non-solar technologies. VPPSA considers one non-solar allocation to be preferable to individual allocations for each technology given the relatively small amount of capacity being allocated and the uncertain market interest in some of the technologies. VPPSA notes that if 1 MW were reserved for each technology, either projects would be significantly smaller than the 2.2 MW eligibility threshold or the program would accept more overall capacity than was solicited through the RFP. Under either scenario,

VPPSA contends that the outcome would likely increase costs to ratepayers. Accordingly, VPPSA states that an open-ended approach through a non-solar allocation is more likely to stimulate the intended development.

With respect to the development of a separate rooftop solar allocation, VPPSA contends that the standard-offer program is not the appropriate policy tool to address concerns associated with siting solar projects. Further, VPPSA suggests that the net metering program was developed to support small-scale solar development, and notes that the Board is in the process of examining the costs and benefits of the net metering program as part of its revisions that will take effect in 2017. VPPSA states that the standard-offer program should not become a *de facto* extension of the net metering program as these programs were designed to accomplish different objectives.

#### **IV. DISCUSSION AND CONCLUSIONS**

##### *Preferred-site solar set-aside*

With respect to the proposal that a separate technology category be established for solar projects that are “preferentially sited” — on rooftops, gravel pits, quarries, brownfields, parking lots, or otherwise within the built environment — we are not persuaded that such preferentially sited solar projects constitute a new technology or technology category of renewable energy as defined under 30 V.S.A. §§ 8002 and 8005a. While the Board is aware of the concerns expressed in participants’ comments related to the siting of new solar projects, the underlying statutory provisions do not provide the policy directive to establish a new technology category for so-called “preferentially sited” solar projects. Therefore, we decline to establish such a category.

##### *Provider Block*

We agree with the Department that the Provider Block should not be subject to any technology allocation requirements. However, we note that through their participation in the Provider Block, Vermont retail electricity providers are able to bid projects of any technology category — not just solar — and if their bids are successful, providers will be contributing to the

statutory goal of including in Vermont's electric supply portfolio renewable energy plants that are diverse in plant capacity and type of renewable energy technology.

*Non-solar set-aside*

The Board appreciates the thoughtful approaches to this complex issue raised by the commenting stakeholders. Our decision with respect to the creation of a technology allocation mechanism is guided by the applicable statutory goals and directives of Sections 8001 and 8005a as well as the goals expressed by stakeholders for a technology allocation that is stable, predictable, and transparent. Accordingly, the technology allocation that we adopt today reflects a combination of the technology allocation methodologies recommended by stakeholders.

Any technology allocation must balance statutory goals and directives that may seemingly be at odds — for instance, supporting the inclusion in Vermont's retail electric supply portfolio of a diversity of renewable energy projects, both in size and in technology, while at the same time ensuring the timely development of such projects at the lowest feasible cost. The allocation must also take into consideration the varying market interest in developing projects from each technology category.

For the above reasons, we adopt the following technology allocation, to remain in effect for the remainder of the standard-offer program unless changed by subsequent Board Order. The size of the developer block for the years 2016-2018 will be approximately 6.375 MW, and will be approximately 8.5 MW for the years 2019-2021. In the years 2016-2018, we direct the Standard Offer Facilitator to make 2.2 MW of this capacity available to projects of any technology category, awarded based on bid price (the "Price-Competitive Developer Block"). For the remainder of the Developer Block capacity — approximately 4.175 MW for the years 2016-2018 — we direct the Standard Offer Facilitator to allocate this capacity on an equal basis to the non-solar technology categories (the "Technology Diversity Developer Block").<sup>9</sup> Similar to the Department's Concept 2 proposal, within each technology category we direct the Standard Offer Facilitator to award contracts based on submitted bid prices, with the lowest-priced bids

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9. The non-solar technology categories currently include hydro, biomass, small wind, large wind, landfill methane, and non-farm methane.

awarded contracts until each technology-specific set-aside has been fulfilled. The cap on a technology category may be exceeded if the marginal bid exceeds the remaining space for that category.<sup>10</sup>

In the years 2019-2021, because the size of the Developer Block will be increasing, we direct the Standard Offer Facilitator to increase the size of the Price-Competitive Developer Block to 4.4 MW. For the remainder of the Developer Block capacity — approximately 4.1 MW for the years 2019-2021 — we direct the Standard Offer Facilitator to allocate this capacity in the same manner as described above for the Technology Diversity Developer Block.

In the event that there is any unbid capacity within technology-specific set-asides in any given year, we direct the Standard Offer Facilitator to award such capacity to project bids from any technology, including solar, on the basis of bid price alone. We wish to make clear that although each non-solar technology category's set-aside will be smaller than the 2.2 MW maximum project capacity allowed, an individual project that exceeds a technology category's set-aside shall be eligible to submit an RFP bid as long as the project is not larger than 2.2 MW in capacity.<sup>11</sup> We conclude that the above technology allocation mechanisms — which include many of the elements proposed by stakeholders — properly balance the applicable statutory goals and directives while also providing stability, predictability, and transparency to standard-offer program participants.

**SO ORDERED.**

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10. A table showing the approximate capacity allocation for each remaining year of the standard-offer program is shown in Attachment A to this Order.

11. By definition, a small wind project may be no larger than 100 kW in capacity.

Dated at Montpelier, Vermont, this 12th day of February, 2016.

s/James Volz )

) PUBLIC SERVICE

s/Margaret Cheney )

) BOARD

s/Sarah Hofmann )

) OF VERMONT

OFFICE OF THE CLERK

FILED: February 12, 2016

ATTEST: s/Judith C. Whitney  
Acting Clerk of the Board

*NOTICE TO READERS: This decision is subject to revision of technical errors. Readers are requested to notify the Clerk of the Board (by e-mail, telephone, or in writing) of any apparent errors, in order that any necessary corrections may be made. (E-mail address: psb.clerk@vermont.gov)*

*Appeal of this decision to the Supreme Court of Vermont must be filed with the Clerk of the Board within thirty days. Appeal will not stay the effect of this Order, absent further order by this Board or appropriate action by the Supreme Court of Vermont. Motions for reconsideration or stay, if any, must be filed with the Clerk of the Board within ten days of the date of this decision and Order.*

**Attachment A**  
**Standard Offer Program Annual Technology Allocation**  
**2016-2018**

Provider Block	1.125 MW
Developer Block	
Price-Competitive Developer Block	2.2 MW
Technology Diversity Developer Block	
Large Wind	0.696 MW
Small Wind	0.696 MW
Food-waste Anaerobic Digestion	0.696 MW
Hydroelectric	0.696 MW
Biomass	0.696 MW
Landfill Methane	0.696 MW

**Standard Offer Program Annual Technology Allocation**  
**2019-2021**

Provider Block	2 MW
Developer Block	
Price-Competitive Developer Block	4.4 MW
Technology Diversity Developer Block	
Large Wind	0.6 MW
Small Wind	0.6 MW
Food-waste Anaerobic Digestion	0.6 MW
Hydroelectric	0.6 MW
Biomass	0.6 MW
Landfill Methane	0.6 MW