

**STATE OF VERMONT  
PUBLIC UTILITY COMMISSION**

Case No. 20-2935-INV

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Investigation to review the 2021  
implementation of the standard-offer program

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**SUPPLEMENTAL INFORMATION REGARDING THE DEPARTMENT OF PUBLIC  
SERVICE RECOMMENDATIONS ON AVOIDED COST PRICE CAPS FOR THE 2021  
STANDARD OFFER PROGRAM SOLICITATION**

On October 9, 2020, the Vermont Public Utility Commission (“Commission” or “PUC”) opened an investigation to implement the 2021 Standard Offer program, including review of the pricing mechanism and the avoided costs that serve as price caps for the program. Opening comments and recommendations were submitted by the Department of Public Service (“Department”), Green Mountain Power Corporation (“GMP”), and Allco Renewable Energy Limited and Allco Finance Limited (collectively “Allco”), respectively, on December 11, 2020. The Commission held a workshop to discuss the comments and recommendations on December 17, 2020. At the workshop, the Department agreed to provide supplemental information regarding the basis of its recommendation that a 15% margin to be applied to the previous year’s average to set the price cap. In an order issued on December 21, 2020, the Commission set January 14, 2021 as the date by which the Department would provide this supplement, with reply comments being due on January 21, 2020. The Commission also asked the participants to this proceeding to comment on whether the Department’s proposal is permissible under 30 V.S.A. § 8005a(f)(1).

*Supplemental information explaining the Department’s recommendation of a 15% margin*

In its December 11, 2020 comments, the Department recommended that the solar price cap be set to 115% of the weighted average of all bids that were awarded contracts in the Price Competitive block or placed in the 2020 Reserve Group. While the cost of solar projects has

generally been decreasing year over year, the Department believes a 15% margin, intended to capture changes to the market that would increase the cost of projects, is appropriate. When the Department originally recommended the 15% margin, the federal Investment Tax Credit (“ITC”) was scheduled to step down from 26% to 22% in 2021 and then to 10% in 2022. If the ITC were applicable to all costs, a drop from 26% to 22% would translate to a 5.4% increase in prices,<sup>1</sup> and the reduction from 22% to 10% would translate to a 15.4% increase in prices.<sup>2</sup> Historical and projected prices with declining ITC are shown in the table below:

RFP YEAR	<u>ACTUAL</u>					<u>PROJECTED</u>	
	2016	2017	2018	2019	2020	2021	2022
<b>Award Group</b>	\$0.092	\$0.091	\$0.096	\$0.087	\$0.089		
<b>(\$/kWh)</b>	0	3	1	9	0		
<b>Reserve Group</b>	\$0.109	\$0.102	\$0.111	\$0.100	\$0.093		
<b>(\$/kWh)</b>	4	9	5	2	6		
	\$0.100	\$0.095	\$0.104	\$0.093	\$0.090	\$0.095	\$0.110
<b>Total (\$/kWh)</b>	6	8	4	2	5	4	1
<b>Annual Change</b>		-4.8%	9.0%	-10.7%	-2.9%	5.4%	15.4%
Allowed ITC							
(original)		30%	30%	30%	26%	22%	10%

<sup>1</sup> Price increase = ((1/(1-26%)) \* (1 - 22%)) - 1 = 5.4%

<sup>2</sup> Price increase = ((1/(1-22%)) \* (1 - 10%)) - 1 = 15.4%

However, these year-over-year impacts would be less because the ITC does not apply to all costs associated with a project (e.g. land lease, property taxes, insurance, accounting, maintenance, and decommissioning reserves), and the cost of solar continues to decrease as shown below.

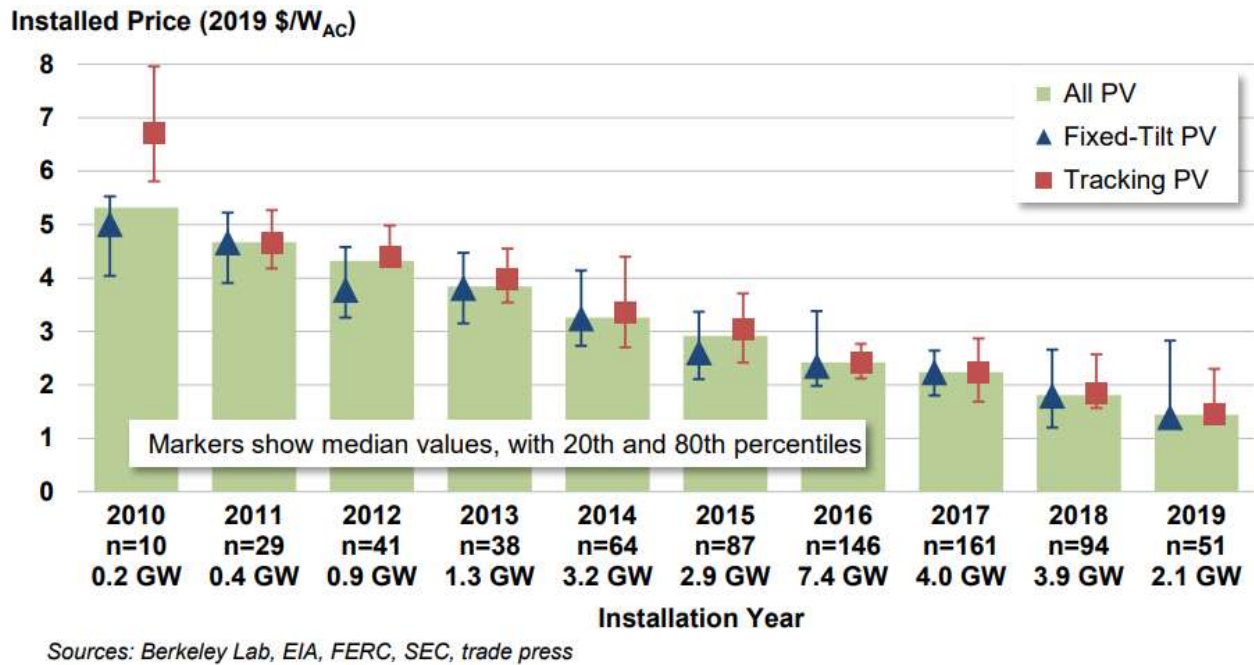


Figure 1: NREL Installed price of solar by mounting type, 2010-2019<sup>3</sup>

Since the Department's original recommendation to set the price cap for solar to 115% of the previous year's average bid price, the phaseout of ITC has been extended as part of the Consolidated Appropriations Act, 2021.<sup>4</sup> Under this legislation, which was signed on December 27, 2020, the ITC will remain at 26% through 2022, then drop to 22% in 2023 and to 10% in

<sup>3</sup> LAWRENCE BERKELEY NATIONAL LABORATORY, UTILITY-SCALE SOLAR DATA UPDATE: 2020 EDITION (NOV. 2020) at slide 20 (funded by the U.S. Department of Energy, Solar Energy Technologies Office), available at [https://emp.lbl.gov/sites/default/files/2020\\_utility-scale\\_solar\\_data\\_update.pdf](https://emp.lbl.gov/sites/default/files/2020_utility-scale_solar_data_update.pdf).

<sup>4</sup> H.R. 133: Consolidated Appropriations Act, 2021 [Including Coronavirus Stimulus & Relief], Pub. L. No. 116-260, H.R. 133, 116<sup>th</sup> Cong. (2020), available at <https://rules.house.gov/sites/democrats.rules.house.gov/files/BILLS-116HR133SA-RCP-116-68.pdf>.

2024. This recent extension to the phaseout of ITC suggests that a 15% margin is greater than needed but because sufficient competition is anticipated, this is not expected to be a significant factor in future auctions.

The Department maintains that its recommendation is permissible under 30 V.S.A. § 8005a(f)(1), as detailed below. However, if the PUC determines that the recommended approach cannot be used, then the Department recommends using publicly available pricing data from the National Renewable Energy Laboratory and the Lawrence Berkley National Laboratory. In the U.S. Solar Photovoltaic System Cost Benchmark: Q1 2018,<sup>5</sup> the benchmark installed cost for commercial solar systems, defined as systems ranging from 10 kW to 2 MW, was \$2.10/W<sub>ac</sub>. Using this installed cost, a 19% capacity factor, and a 0.5% annual degradation factor, the price cap would be \$0.103/kWh. The Department recognizes that the referenced report reflects data that is more than 2-years old, but absent detailed installation cost data from developers, this the best data source available. Because prices have continued to decrease, the Department does not have concerns that using this data to calculate a price cap will discourage participation in the RFP.

*Permissibility under 30 V.S.A. § 8005a(f)(1)*

The Department maintains that its recommendation is consistent with 30 V.S.A. § 8005a(f)(1), which provides that,

“the Commission shall use a market-based mechanism, such as a reverse auction or other procurement tool, to obtain up to the authorized amount of a category of renewable energy, if it first finds that the use of the mechanism is consistent with:

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<sup>5</sup> NATIONAL RENEWABLE ENERGY LABORATORY, *U.S. Solar Photovoltaic System Cost Benchmark: Q1 2018* (Nov. 2018) at vi, 42, available at <https://www.nrel.gov/docs/fy19osti/72399.pdf>.

- (A) applicable federal law; and
- (B) the goal of timely development at the lowest feasible cost.”

Section 8005a(f)(1) does not expressly require nor preclude a cap to that market-based mechanism. Rather, in 2013 the Commission determined that the cap should be implemented to ensure that the Standard Offer program is consistent with applicable federal law.<sup>6</sup> Much more importantly, as observed within the Department's December 11, 2019 comments in this proceeding, the Federal Energy Regulatory Commission's ("FERC") recent Public Utilities Regulatory Policies Act ("PURPA") rulemaking orders specifically reference California cases on multi-tiered rates, which FERC has explicitly authorized in its new rule, and the new rule also explicitly authorizes competitive solicitations.

The Department's recommendations are also consistent with 30 V.S.A. § 8005a(f)(2)(B) which specifies that:

“the term ‘avoided cost’ means the incremental cost to retail electricity providers of electric energy or capacity, or both, which, but for the purchase through the standard offer, such providers would obtain from distributed renewable generation that uses the same generation technology as the category of renewable energy for which the Commission is setting the price.”

Section 8005a(f)(2)(B) also provides factors that the PUC should consider in setting those avoided costs. The Department's recommendation is consistent with that definition. Indeed, when first implementing the current market-based mechanism the

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<sup>6</sup> *Programmatic Changes to the Standard-Offer Program*, Docket No. 7873, and *Investigation into the Establishment of Standard-Offer Prices under the Sustainably Priced Enterprise Development ("SPEED") Program*, Docket No. 7874, joint Order of 03/01/2013 at 12-14, 16-19 (citing *California Pub. Util. Comm'n*, 132 FERC ¶ 61,047 (July 15, 2010) at ¶¶ 64-65, 67; *Cal. Pub. Util. Comm'n*, 133 FERC ¶ 61,059 (October 21, 2010) at ¶ 26; and *See California Pub. Util. Comm'n*, 134 FERC ¶ 61,044 (January 20, 2011) at ¶ 30. These Federal Energy Regulatory Commission ("FERC") decisions state that Standard Offer rates cannot exceed avoided costs, but also clarify that states may use "multi-tiered" and resource-specific avoided costs).

Commission observed that “the market-based approach allows each generation facility to bid to develop a project based upon its own cost structure, which may be lower than the generic avoided cost (and perhaps even a better reflection of the true avoided cost than the generic pricing).”<sup>7</sup> With these statutory directives and the program’s history in mind, it is important to recognize that while the approach the Commission has used in setting the avoided cost cap in previous years with a detailed financial model was valid, it is not the only valid approach. Now the Commission has several years of experience, each with sufficient competition, such that using RFP results from previous years is indicative of the market and the cost to build. As noted in the Department’s December 11, 2019 comments, given the mature stage of the Standard Offer program and its several years of program history, a bottom-up, time-intensive update of the model and its assumptions is not warranted at this time for those categories where there is robust competition, nor is it required by applicable law.

Further, the statute does not require that a cost cap be set for any specific technology. Section 8005a(f)(2)(A) requires that the “avoided cost of the Vermont composite electric utility” be used if the Commission finds: (i) a market-based mechanism is inconsistent with federal law; or (ii) use of the market-based mechanism “is reasonably likely to result in prices higher than the prices that would apply” using the category-specific avoided cost of the Vermont composite electric utility system. If the Commission finds that neither of these conditions apply, there is no requirement in

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<sup>7</sup> *Programmatic Changes to the Standard-Offer Program*, Docket No. 7873, and *Investigation into the Establishment of Standard-Offer Prices under the Sustainably Priced Enterprise Development (“SPEED”) Program*, Docket No. 7874, joint Order of 03/01/2013 at 18-19.

Section 8005a that requires the Commission to establish a cost cap that is equal to the Standard Offer Program definition of avoided cost. Notwithstanding this, a cost cap is a reasonable component of a market mechanism such as an RFP. Importantly, the statute provides the Commission with broad flexibility in setting that cost cap for the competitive procurement category.

For these reasons, the Department's recommendation is consistent with the statute's definition of avoided cost and "goal of timely development at the lowest feasible cost."<sup>8</sup> The Commission's request for proposals ("RFP") mechanism has led to sufficient price discovery. The data indicates that the cost to build and operate solar electric facilities has declined and continues to. Moreover, the Standard Offer statute provides for reallocation of capacity if project bids are not operationally viable, and an RFP can be rerun in the unlikely event that it fails to garner appropriate bids. As such, the Standard Offer program remains a valid, voluntary, alternative to PURPA under Vermont and applicable federal law.

Dated at Montpelier, Vermont this 14<sup>th</sup> day of January 2021.

VERMONT DEPARTMENT OF PUBLIC SERVICE

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<sup>8</sup> 30 V.S.A. § 8005a(f)(1).