STATE OF VERMONT
PUBLIC UTILITY COMMISSION

Case No. 18-0360-INV

2019 standard-offer prices for existing hydroelectric plants with a nameplate capacity of 5 MW or less	

Order entered: 09/17/2019

2019 STANDARD-OFFER PRICES FOR EXISTING HYDROELECTRIC PLANTS

In today's Order, the Vermont Public Utility Commission ("Commission") adopts, with clarifications and modifications, the conclusions and recommendations made in the Hearing Officer's proposal for decision.

The proposal for decision was circulated for comment. Comments were filed by several participants in this proceeding. The participants' comments and our determinations are addressed in the Commission discussion and conclusions section below.

PROPOSAL FOR DECISION

I. INTRODUCTION

The Vermont Public Utility Commission ("Commission") is required to annually establish the standard-offer[1] price for existing hydroelectric plants as the sum of five elements identified in the statute.[2]

In this proposal for decision, I recommend that the Commission make adjustments to both the energy and capacity elements of the price for application to all executed standard-offer contracts for existing hydroelectric plants. I also recommend that the Commission make an adjustment to the previously established price element for the value of the long-term contracts

[1] More information on the standard-offer program can be found at: http://puc.vermont.gov/electric/standard-offer and http://www.vermontstandardoffer.com/.

[2] 30 V.S.A. § 8005a(p)(3). The price of a standard-offer contract shall be the sum of the following elements:
(A) a two-year rolling average of the ISO New England Inc. (ISO-NE) Vermont zone hourly locational marginal price for energy;
(B) a two-year rolling average of the value of the plant's capacity in the ISO-NE forward capacity market;
(C) the value of avoided line losses due to the plant as a fixed increment of the energy and capacity values;
(D) a two-year rolling average of the market value of environmental attributes, including renewable energy credits; and
(E) the value of a 10- or 20-year contract.

and make no adjustments to the previously established price element for the value of avoided line losses.

On May 23, 2019, the Vermont General Assembly passed Act 31,[3] which altered the way that the Commission must calculate the value of environmental attributes (also known as "renewable energy credits" or "RECs").[4] Recognizing the changes required by Act 31, I recommend the Commission seek additional stakeholder input before establishing a revised value for the price element for environmental attributes.

II. BACKGROUND AND PROCEDURAL HISTORY

In 2013, the Commission first established the standard-offer price for existing hydroelectric plants that was the sum of five elements identified in the statute.[5] The price paid was the lesser of $0.08 per kWh (adjusted annually for inflation) or the sum of five elements.

In an Order issued on February 20, 2014, the Commission adjusted the energy and capacity elements of the price for application to all executed contracts for existing hydroelectric plants.[6] In addition, the Commission adjusted the environmental attributes element of the price for inclusion in future executed contracts.[7] The price elements for avoided line losses and the value of the long-term contract remained unchanged from the 2013 Order.

In Orders issued in 2015, 2016, 2017, and 2018, the Commission adjusted both the energy and capacity elements of the price for application to all executed standard-offer contracts for existing hydroelectric plants.[8] The Commission made no adjustments to the other three price elements: (1) the value of environmental attributes; (2) the value of avoided line losses; and (3) the value of the long-term contracts.

For 2019 contracts, the Commission required recommended adjustments to the standard-offer prices for existing hydroelectric plants to be filed on or before November 15, 2018.[9]

On November 15, 2018, the Vermont Department of Public Service ("Department") filed comments recommending no changes for 2019.

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[3] Public Act No. 31 (2019 Vt., Bien. Sess.), codified in 30 V.S.A. § 8005a(p).

[4] Act 31 takes effect on July 1, 2019. All statutory references in this proposal for decision assume the statutory changes are in effect.

[5] Docket 7874, Order of 2/7/13 ("2013 Order").

[6] 30 V.S.A. § 8005a(p)(4)(A). Docket 7874, Order of 2/20/14 ("2014 Order").

[7] 30 V.S.A. § 8005a(p)(4)(B)(ii).

[8] Docket 7874, Order of 3/6/15 ("2015 Order"); Docket 7874, Order of 4/18/16 ("2016 Order"); Case No. 17-3148-INV, Order of 5/25/17 ("2017 Order"); and Case No. 17-3148-INV, Order of 3/13/18 ("2018 Order").

[9] 2018 Order at 6.

On November 15, 2019, Green Mountain Power Corporation ("GMP") filed comments recommending changes to two pricing elements: the value of environmental attributes and the value of the long-term contracts.

No other participants filed recommendations on the statutory criteria in response to the 2018 Order.

On May 23, 2019, Act 31 was passed. Act 31 removed the requirement that that the price paid be the lesser of $0.08 per kWh or the sum of five elements, and instead requires the price paid to be the sum of the five elements identified in the statute. In addition, Act 31 made changes to the fourth price element, requiring that the element be a two-year rolling average of the market value of environmental attributes.

III. DISCUSSION AND CONCLUSIONS

The five elements of the standard-offer price are: (1) the two-year rolling average of the ISO-NE Vermont zone hourly locational marginal price for energy; (2) the two-year rolling average of the value of the plant's capacity in the ISO-NE forward capacity market; (3) the value of avoided line losses; (4) the two-year rolling average of the market value of environmental attributes, including renewable energy credits; and (5) the value of a 10- or 20-year contract.[10]

The Commission is required annually to adjust the price elements of energy, capacity, and environmental attributes for all executed contracts.[11] The Commission may also periodically adjust the value of environmental attributes of an executed contract based upon whether the unit becomes certified by the Low-Impact Hydropower Institute of Portland, Maine ("LIHI")[12] or loses such certification.[13] The price elements of avoided line losses and the value of a long-term contract remain fixed at their values at the time a contract is signed for the duration of an executed contract. The Commission may annually adjust the two elements for inclusion in future executed contracts.[14]

My recommendations for each of the five pricing elements are addressed separately

[10] 30 V.S.A. § 8005a(p)(3)(A) through (E).
[11] 30 V.S.A. § 8005a(p)(4)(A)(i).
[12] LIHI is a non-profit 501(c)(3) organization dedicated to reducing the impacts of hydroelectric generation through the certification of hydroelectric projects that have avoided or reduced their environmental impacts pursuant to LIHI's criteria. In order to be LIHI-certified, a hydroelectric facility must meet criteria in the following eight areas: river flows, water quality, fish passage and protection, watershed protection, threatened and endangered species protection, cultural resource protection, recreation, and facilities recommended for removal.
[13] 30 V.S.A. § 8005a(p)(4)(A)(ii).
[14] 30 V.S.A. § 8005a(p)(4)(B)(ii).

below.

Energy Price

I recommend that the Commission find that the two-year rolling average of the ISO-NE Vermont zone hourly real-time locational marginal price for calendar years 2017 and 2018 is 3.79 cents per kWh.[15] The energy price element is calculated with the same methodology used by the Commission in past determinations.[16]

Capacity Price

In 2013, the Commission determined that the capacity price element for each hydroelectric unit would be calculated by multiplying the ISO-NE capacity rating by the forward capacity market clearing price for the appropriate period and dividing that revenue value by the kWh the plant generates.[17] The forward capacity market clearing price used to calculate the capacity price element is the payment rate received by generators in the forward capacity auction. In forward capacity auctions with excess capacity, this value represents the prorated clearing price, and in forward capacity auctions with no excess capacity this value represents the forward capacity market clearing price.[18]

I recommend that the average forward capacity market clearing price to be used in determining the 2019 capacity price element be adjusted to $8.29 per kW-month based upon the two-year average payment rate for forward capacity auction 2017-2018 results and 2018-2019 results.[19]

The Commission has previously determined that for units that serve as load reducers, a 15 percent adder would be made to the capacity revenue value to reflect that the unit is reducing

[15] The ISO-NE locational marginal price values referenced in this proposal for decision were found at: http://www.iso-ne.com/isoexpress/web/reports/pricing/-/tree/zone-info.

[16] 2013 Order; 2014 Order; 2015 Order; 2016 Order; 2017 Order; and 2018 Order. The 2018 energy price element for all hydroelectric units was set at 3.08 cents per kWh.

[17] 2013 Order. An existing hydroelectric unit is categorized as either an ISO-NE settlements only generator or a load reducer. If a unit is a settlements only generator, then it will have forward capacity market-qualified winter and summer capacity ratings. Load reducers decrease the capacity obligation for a utility by reducing the utility's load requirement at the time of the peak load for the ISO-NE system. The capacity rating for a load-reducer unit will be based on its generation at the time of the ISO-NE peak for the previous two years.

[18] The two-year average payment rate for forward capacity auction 2016-2017 results and 2017-2018 results was $4.88 per kW-month.

[19] Forward capacity auction results were found at: https://www.iso-ne.com/markets-operations/markets/forward-capacity-market/?document-type=FCA Results.

the utility's capacity reserve requirement.[20] No participant has recommended changing the capacity adder. Therefore, I recommend that the Commission require that the 15 percent adder to the capacity revenue value continue to be used for 2019 executed contracts for units that serve as load reducers.

Avoided Line Losses

The Commission has previously determined that the value for avoided line losses is either 3 or 5 percent of the sum of the value of the energy and capacity elements.[21] If there is one transformation (from 115 kV to interconnection voltage), then the losses are assumed to be 3 percent. If there is an additional transformation (from sub-transmission voltage to interconnection voltage), then the losses are assumed to be 5 percent.

No participant has recommended changing the value for avoided line losses. Therefore, I recommend that the value for avoided line losses remain at 3 or 5 percent for 2019 executed contracts.

Environmental Attribute Values

The Commission has previously determined that the environmental attribute values would be determined based on the renewable energy credits attributable to the plant's generation.[22] Under the changes required by Act 31, the Commission is required to establish a value for the price element for environmental attributes that is a two-year rolling average of the market value of environmental attributes, including renewable energy credits.

Because of the change in requirements under Act 31, I recommend the Commission conduct further process to establish a value for the price element for environmental attributes. Under this process, I recommend that the Commission provide participants with the opportunity to file recommendations for establishing a value for the price element for environmental attributes that is a two-year rolling average of the market value of environmental attributes. I also recommend that participants be provided an opportunity for responses.

Value of Long-Term Contract

The Commission has previously determined that a 5 percent adder to the value of the

[20] 2013 Order; 2014 Order; 2015 Order; 2016 Order; 2017 Order; and 2018 Order.
[21] 2013 Order; 2014 Order; 2015 Order; 2016 Order; 2017 Order; and 2018 Order.
[22] 2014 Order; 2015 Order; 2016 Order; 2017 Order; and 2018 Order.

energy and capacity components of the price for 10-year contracts, and a 10 percent adder for 20-year contracts, would be used to reflect the value for long-term contracts.[23]

GMP recommended that the adder to the value of the energy and capacity components be zero percent for both the 10-year and 20-year contracts. GMP maintained that the use of 5 percent and 10 percent adders overstate the value that Vermont distribution utilities realize from these standard-offer contracts. GMP contended that the energy component of the price (the average of all hours of the real-time locational marginal price for the Vermont Zone for the previous two calendar years) tends to overstate the energy value of hydroelectric generation in Vermont – whose characteristic output shape tends to feature higher output during spring months (that tend to feature relatively low locational marginal prices) and less output during winter months and peak summer months (that tend to feature relatively high locational marginal prices).[24] In 2017, GMP estimated (based on a review of output from four standard-offer hydroelectric projects in the years 2015 and 2016[25]) that this overstatement was on the order of 15 percent.[26] Further, GMP stated that is not necessary to include generic price adders to reflect the additional value of having long-term standard-offer contracts because most Vermont utilities have substantial long-term supply sources in their committed portfolios.[27]

I recommend that adders to the value of the energy and capacity components of the price for 10-year and 20-year contracts executed in 2019 be adjusted to zero, reflecting that the energy and capacity components of price already account for the long-term value of these contracts. I conclude that the use of zero adders is consistent with previous Commission determinations. In the 2013 Order, the Commission determined these adders were necessary to capture the value of the contract structure providing price stability over its duration, due to the restriction that the total annual price paid cannot not exceed $0.08 per kWh. This contract limitation has been eliminated under the changes required to the program by Act 31. In addition, because the characteristic output of Vermont hydroelectric plants is higher during spring months when locational marginal prices are lower, the energy component of the price (an average of locational

[23] 2013 Order; 2014 Order; 2015 Order; 2016 Order; 2017 Order; and 2018 Order.
[24] GMP Comments at 1-2.
[25] Currently, five hydroelectric generation plants participate in the standard-offer program for new resources with a plant capacity of 2.2 MW or less, pursuant to 30 V.S.A. § 8005a(b) through (n). No plants currently participate in the standard-offer program pursuant to Section 8005a(p).
[26] GMP Comments at 1.
[27] GMP Comments at 2.

marginal prices across the entire year) represents a higher price than the energy market purchases that a distribution utility avoids. GMP estimated this difference in price to be approximately 15 percent.[28] Thus, by using an average value, the energy component is already capturing the value of the contract structure providing price stability and the adder to the 10-year and 20-year contracts can be appropriately adjusted to zero.

Summary of Price Elements

The table below summarizes my recommendations for the 2019 values of the elements for use in establishing a standard-offer price for existing hydroelectric facilities with a nameplate capacity of 5 MW or less.

2019 Price Elements for Existing Hydroelectric Plants				
	10-Year Contract LIHI Certified	10-Year Contract	20-Year Contract LIHI Certified	20-Year Contract
Energy	3.79 cents/kWh	3.79 cents/kWh	3.79 cents/kWh	3.79 cents/kWh
Capacity	TBD	TBD	TBD	TBD
Avoided Line Losses	3% or 5%	3% or 5%	3% or 5%	3% or 5%
Environmental Attributes	TBD	TBD	TBD	TBD
Contract Adder	0%	0%	0%	0%
Note: The capacity price element for each hydroelectric unit shall be calculated by multiplying the ISO-NE capacity rating by the forward capacity market payment price and dividing that revenue value by the kWh generated by the plant. The capacity rating for a settlements only generator is the forward capacity market-qualified winter and summer capacity rating. The capacity rating for a load-reducer is its generation at the time of the ISO-NE peak for the previous two years. The forward capacity market payment price for use in 2019 contracts is $8.29 per kW-month. For load reducers, a 15 percent adder shall be made to the capacity revenue value.				

Request for Recommendations on 2020 Price Elements

The Commission is required to annually adjust the energy, capacity, and environmental attribute values for all executed contracts.[29] The Commission also may annually adjust the price elements of avoided line losses and the value of a long-term contract for inclusion in future executed contracts.[30]

Therefore, I recommend that the Commission require participants to file any

[28] GMP Comments at 1.
[29] 30 V.S.A. § 8005a(p)(4).
[30] 30 V.S.A. § 8005a(p)(4)(B)(ii).

recommendations with respect to the values to be used for determining the pricing elements for both existing and future standard-offer contracts by November 15, 2020.

IV. CONCLUSION

Based on the consideration of the participants' comments and the requirements under 30 V.S.A. § 8005a(p), I recommend that the Commission adopt the above proposal with respect to standard-offer price for existing hydroelectric plants.

This proposal for decision was circulated to the participants for their review and comment in accordance with 3 V.S.A. § 811.

Mary Jo Krolewski

Mary Jo Krolewski
Hearing Officer

V. COMMISSION DISCUSSION AND CONCLUSIONS

The Department, GMP, Ampersand Moretown Hydro LLC ("Ampersand"), and the Vermont Independent Power Producers Association, Inc. ("VIPPA") filed comments on the proposal for decision. The Department and GMP supported the proposal for decision. Ampersand and VIPPA raised objections with respect to two price elements: the two-year rolling average of the market value of environmental attributes; and the value of a 10- or 20-year contract.

The Commission requested supplemental filings addressing the price element that reflects the value of environmental attributes. GMP provided a proposed methodology for determining the value of environmental attributes and provided recommended values for use in 2019 standard-offer contracts. The Department, Ampersand, and VIPPA supported GMP's recommendations.

On August 27, 2019, at VIPPA's request, the Commission conducted an oral argument addressing the price element that reflects the value of a 10- or 20-year contract.

Based on our review of the proposal for decision, the participants' comments, and the oral argument, we adopt, with modifications, the conclusions and recommendations of the Hearing Officer. Specifically, we adopt the Hearing Officer's recommendation with respect to three price elements: energy, capacity, and avoided line losses. With respect to the price element addressing the value of environmental attributes, we adopt the recommendations made by GMP and supported by the other participants. With respect to the price element addressing the value of a 10- or 20-year contract, we adopt a modified value. The participants' comments and our determinations are addressed separately below by topic area.

Environmental Attribute Values

Participants' Comments

GMP recommended, and the other participants supported, a methodology for establishing a price element that reflects a two-year rolling average of the market value of environmental attributes, and GMP provided specific values for use in 2019 standard-offer contracts.

GMP recommended that the environmental attribute values be determined based on the renewable energy credits attributable to a plant's generation. GMP stated that the output of an existing hydroelectric plant currently qualifies for one or more of three categories of renewable

energy credits: Massachusetts Class II;[31] Connecticut Class I;[32] and VT Tier I or Maine Existing (or Class II).[33] Accordingly, GMP recommended that the price element include three values reflecting these categories.

To determine these renewable energy credit values for a given contract year, GMP recommended that indicative broker sheet prices from the previous two years be used. GMP stated that GT Environmental Finance, LLC of Austin, Texas, a broker that GMP uses for renewable energy credit transactions, is willing to provide price data, including bid price, ask price, and midpoint (i.e., average of bid and ask prices) for use by GMP and the Standard Offer Facilitator in submitting annual filings to the Commission.[34] GMP anticipated that broker quotes would be available within three months of the calendar year end and could be used as the basis for an annual filing consisting of a schedule detailing month-end renewable energy credit prices by vintage year for the previous two-year period. GMP represented that the broker prices for the Massachusetts, Connecticut, and Maine renewable energy credits are based on month-end quotes by vintage year (bid/ask/midpoint) from Intercontinental Exchange or month-end Over-the-Counter quotes (bid/ask/midpoint).[35] GMP maintained that these prices are reflective of reasonable expectations of prices that counterparties would be willing to transact for the specific class and vintage of renewable energy credits and tend to be at or near prices at which each type of renewable energy credit would trade.

Based on broker quotes for 2017 and 2018 provided by GMP, the two-year average price for Massachusetts Class II renewable energy credits is 2.58 cents/kWh, the two-year average price for Connecticut Class I renewable energy credits is 1.53 cents/kWh, and the two-year

[31] An existing hydroelectric unit qualifies for Massachusetts Class II renewable energy credits if it meets the following requirements: started operation before 1998; has a generating capacity of not more than 7.5 MW; and has LIHI certification.

[32] An existing hydroelectric plant qualifies for Connecticut Class I renewable energy credits if it meets the following requirements: a run-of-the-river hydroelectric plant that began operation after July 1, 2003, and has a generating capacity of not more than 30 MW, or a run-of-the-river hydroelectric plant that received a new Federal Energy Regulatory Commission license after January 1, 2018.

[33] An existing hydroelectric plant qualifies for Maine Existing (or Class II) renewable energy credits if the output is in New England or capable of being delivered to New England (e.g., New York wind) with a nameplate capacity of less than 100 MW and built before January 1997.

[34] VEPP, Inc. currently serves as the Standard Offer Facilitator under contract with the Commission.

[35] GMP recommended the use of broker quotes from Maine Existing renewable energy credits because Vermont Tier I quotes were not available for the 2017 and 2018 time period and because they represented a reasonable proxy as qualifying renewable energy credits for the third category.

average price for Maine Existing renewable energy credits is 0.13 cents/kWh. These values would be the ones used in 2019 standard-offer contracts.

Discussion

We are adopting GMP's proposal for determining the price element that reflects the value for environmental attributes. The Commission has previously determined that the price element reflecting the value for environmental attributes would be determined based on the renewable energy credits attributable to the plant's generation.[36] In past decisions, for hydroelectric plants that meet the certification requirements under the LIHI program, the value was based on the price of Massachusetts Class II renewable energy credits, and for all other eligible hydroelectric plants the value was based on Maine Existing (Class II) renewable energy credits. Under the changes required by Act 31, we will continue to adopt a similar approach by using renewable energy credit prices to determine the price element. As the participants noted, the output of an existing hydroelectric plant under the standard-offer program could qualify for one or more of three categories of renewable energy credits: Massachusetts Class II; Connecticut Class I; and VT Tier I or Maine Existing (or Class II). Accordingly, we are establishing a price element that includes three values reflecting these categories.

To determine these renewable energy credit values for a given contract year, we adopt the recommended approach of using indicative broker sheet prices from the previous two years. GMP stated that GT Environmental Finance, LLC is willing on an annual basis to provide month-end price data, including bid price, ask price, and midpoint. The provided data reflective of the prices that each type of renewable energy credit would trade. Therefore, the average of the midpoint of the previous two years represents the two-year rolling average of the market value of environmental attributes, consistent with the statutory requirements of Section 8005a(p)(3)(D). Within three months of the calendar year end, GMP or the Standard Offer Facilitator will submit an annual filing of this broker data to the Commission for use in standard-offer contracts.

For use in 2019 standard-offer contracts, the two-year average price for Massachusetts Class II renewable energy credits shall be 2.58 cents/kWh, the two-year average price for

[36] 2014 Order; 2015 Order; 2016 Order; 2017 Order; and 2018 Order.

Connecticut Class I renewable energy credits shall be 1.53 cents/kWh, and the two-year average price for Maine Existing renewable energy credits shall be 0.13 cents/kWh.

Value of Long-Term Contract

Participants' Comments

The Department and GMP both supported the Hearing Officer's recommendation that the adders to the value of the energy and capacity components of the price for 10-year and 20-year contracts executed in 2019 be adjusted to zero. The Department maintained that the new structure of these long-term contracts (i.e., the removal of the $0.08 per kWh price cap) no longer provides the same price stability as the previous structure that included a price cap. The Department also maintained that the calculated energy price already overstates the value of the energy (i.e., the amount of hydroelectric generation tends to be higher during low energy price times such as the spring, and lower during high price periods such as the winter and summer).

Ampersand maintained that the 2018 contract adders (5% for 10-year contracts and 10% for 20-year contracts in 2018) are appropriate compensation for long-term contracts, enhance the ability of existing hydroelectric plants to continue to operate, and provide a reliable, local source of clean energy. Ampersand asserted that long-term contracts provide value to ratepayers because hydroelectric generators provide a stable source of power and have output profiles that are complementary to other renewables such as solar and wind. Ampersand argued that adjusting the contract adder values to zero is not consistent with the legislative intent because if the Legislature had intended for the values to be zero, it would have removed these elements from the calculation entirely. Ampersand further argued that New England wholesale energy and capacity prices are increasingly unrepresentative of the value of existing plants and that without the adder existing hydroelectric plants will be unfairly compensated. Ampersand further maintained that the contract adder is needed to compensate the hydroelectric plant for locking up its investment over a long term and that without the contract adders, hydroelectric generators may seek to enter into much shorter-term contracts.

VIPPA argued that adjusting the contract adder values to zero is clear error because it conflicts directly with the plain language of the statute and legislative intent. VIPPA maintained that it is plain that the Legislature directed the Commission to include a value for long-term contracts as a separate element to the standard-offer price and that the statute is directive and does not give the Commission discretion to exclude a value for long-term contracts. VIPPA

asserted that assigning zero as the value for 10- and 20-year contracts circumvents the legislative directive expressed in the plain language of 30 V.S.A § 8005a(p)(3)(E). VIPPA further argued that including a separate value for 10- and 20-year contracts furthers the statutory objective under 30 V.S.A. § 8001(a)(3) to "provide an incentive for the State's retail electricity providers to enter into affordable, long-term, stably priced renewable energy contracts that mitigate market price fluctuation for Vermonters." VIPPA maintained that adjusting the contract adder values to zero frustrates State renewable energy policy, which seeks to maintain existing in-state hydroelectric facilities for the benefit of Vermonters, to provide incentives to increase output from existing facilities, and to ensure that Vermont ratepayers are served by a diversity of renewable energy resources. VIPPA further maintained that long-term contracts facilitate financing for efficiency and other upgrades to existing hydroelectric facilities in furtherance of State policy goals. In addition, VIPPA asserted that providing an incentive for long-term contracts also recognizes that renewable energy credits under the standard-offer program go to Vermont's utilities and provide them with long-term arbitrage opportunity to benefit their ratepayers.

Discussion

We decline to adopt the Hearing Officer's recommendation that adders to the value of the energy and capacity components of the price for 10-year and 20-year contracts executed in 2019 be adjusted to zero. Instead, as discussed below, we adopt a value of 1% for 10-year contracts and 2% for 20-year contracts.

Section 8005a(p)(3)(E) requires the Commission to establish a price element that reflects "the value of a 10- or 20-year contract." The plain language does not specify the value, nor does it specify whether that value should be positive, negative, or zero. Instead, the plain language simply requires that the Commission establish a price element that reflects the value of a long-term contract. We are adopting positive values and therefore need not reach the issue of whether we can adjust the contract value to zero.

In past proceedings, the Commission has been mindful of the statutory goals under 30 V.S.A. § 8001(a) and that Vermont distribution utilities, ultimately ratepayers, will be purchasing the output of the existing hydroelectric plants eligible for a standard-offer contract. The Section 8001(a) goals for renewable energy include:

> (1) Balancing the benefits, lifetime costs, and rates of the State's overall energy portfolio to ensure that to the greatest extent possible the economic benefits of renewable energy in the State flow to the Vermont economy in general, and to the rate-paying citizens of the State in particular.
> …..
> (3) Providing an incentive for the State's retail electricity providers to enter into affordable, long-term, stably priced renewable energy contracts that mitigate market price fluctuation for Vermonters.
> …..
> (8) Promoting the inclusion, in Vermont's electric supply portfolio, of renewable energy plants that are diverse in plant capacity and type of renewable energy technology.

In past contract periods, before Act 31 eliminated the restriction that the total annual price paid cannot exceed $0.08 per kWh, the Commission included positive contract adders (5% for 10-year contracts and 10% for 20-year contracts in 2018). These positive adders balanced the statutory goals to provide an incentive for distribution utilities to enter into affordable, long-term, stably priced renewable energy contracts that ensure economic benefits to ratepayers to promote renewable energy plants that are diverse in plant capacity and type of renewable energy. The positive adders promoted hydroelectric plants by providing them with higher energy and capacity prices, but the corresponding costs to distribution utilities and ratepayers were limited to contracts that did not exceed an affordable, long-term, stable price of $0.08 per kWh (adjusted annually for inflation).

VIPPA and Ampersand supported the use of the 2018 contract adders of 5% for 10-year contracts and 10% for 20-year contracts but provided no persuasive information to support maintaining these levels. VIPPA argued that the Commission has historically assigned the values of 5% and 10% and that these values should continue. This argument fails to address the elimination of the $0.08-per-kWh contract price cap under Act 31 and the Commission's previous rationale for the adoption of the 5% and 10% values. In 2013, the Commission adopted these stipulated values supported by participants recognizing that the unique structure of the contract included a price cap of $0.08 per kWh and provided "price stability over its duration, due to the restriction that the total annual price paid cannot rise faster than the rate of inflation."[37] In 2014, with a request that the adders be reconsidered, the Commission declined to

[37] Docket 7874, Order of 2/7/13 at 8.

change the adders in the absence of specific alternatives and because with a price cap in place, the total annual price paid under a contract "cannot rise faster than inflation."[38]

Further, in support of the use of the historical contract adders of 5% and 10%, VIPPA and Ampersand claimed that energy and capacity prices are increasingly unrepresentative of the value of existing plants, but provided no information supporting the claim. Instead, the information presented in this proceeding indicates that the energy price element of the standard-offer contract will overcompensate hydroelectric plants, providing them with an above-market energy price over a contract term of 10 to 20 years. Because the characteristic output of Vermont hydroelectric plants is higher during spring months when locational marginal prices are lower, the energy component of the price (an average of locational marginal prices across the entire year) represents a higher price than the energy market purchases that a distribution utility avoids. As identified in the proposal for decision, the difference in price is estimated to be approximately 15%.

Given the program changes required by Act 31 and the information that the energy price element will overcompensate hydroelectric plants, we conclude that the 5% and 10% contract value are no longer supported. The contract limitation of $0.08 per kWh has been eliminated under the changes required to the program by Act 31, significantly reducing the price stability of the contract. The use of two-year rolling market averages of the price elements for energy, capacity, and environmental attributes provides some contract price stability, but not as significantly as the previous $0.08-per-kWh contract limitation. As discussed, the energy component of the price results in Vermont distribution utilities purchasing power at above-market prices. This suggests that the economic value of a long-term contract to Vermont distribution utilities may be zero or negative, and not a value of 5% or 10%.

However, despite these concerns, we decline to adopt the Hearing Officer's recommendation to set the price element that reflects the value of a 10- or 20-year contract to zero. Instead, we are adopting contract values of 1% and 2%. We conclude that positive contract values are needed to continue with past precedent of balancing statutory goals to provide distribution utilities with affordable, long-term, stably priced renewable energy contracts and promote a diversity of renewable energy plants. Positive contract values also recognize that a separate statutory program was established to specifically encourage existing hydroelectric plants

[38] Docket 7874, Order of 2/20/14, at 9.

with a nameplate capacity of 5 MW or less. In establishing contract values of 1% and 2%, we recognize that no specific information was provided by participants to precisely support these values, similar to past proceedings that established the stipulated values of 5% and 10%. As counsel for VIPPA noted at oral argument, the choice of value is a matter of a "judgement call" by the Commission.[39] Rather, contract values of 1% and 2% represent an appropriate balance between the somewhat competing statutory goals of promoting existing hydroelectric plants and providing distribution utilities and ultimately ratepayers with affordable, long-term, stably priced power.

Summary of Price Elements

The table below summarizes the 2019 values of the five price elements used to establish a standard-offer price for existing hydroelectric plants with a nameplate capacity of 5 MW or less.

2019 Price Elements for Existing Hydroelectric Plants		
	10-Year Contract	*20-Year Contract*
Energy	3.79 cents/kWh	3.79 cents/kWh
Capacity	$8.29 /kW-month*	$8.29 /kW-month*
Avoided Line Losses	3% or 5%	3% or 5%
Environmental Attributes	2.58 cents/kWh for LIHI certified 1.53 cents/kWh for CT Class I certified 0.13 cents/kWh for other	2.58 cents/kWh for LIHI certified 1.53 cents/kWh for CT Class I certified 0.13 cents/kWh for other
Contract Adder	1%	2%

* The total amount paid for capacity each month shall be the capacity price element multiplied by the ISO-NE Forward Capacity Market-qualified winter and summer capacity ratings for the hydroelectric plant, adjusted further by the contract adder. If the plant is a load-reducer, the capacity rating is its generation at the time of the ISO-NE peak for the previous two years. For load reducers, a 15% adder shall be made to the capacity payment.

Note: An illustrative value of the capacity price element (in cents/kWh) for a plant that has qualified capacity rating equal to 50% of its nameplate capacity and achieves an annual capacity factor of 40% would be 1.42 cents/kWh. For a LIHI-certified plant that serves as a load reducer with 3% avoided line losses and a 10-year contract, the total of the 2019 five price elements would be approximately 8.21 cents/kWh.

VI. ORDER

IT IS HEREBY ORDERED, ADJUDGED, AND DECREED by the Public Utility Commission ("Commission") of the State of Vermont that:

[39] Tr. 8/27/19 at 8 (Cadwell).

1. The conclusions and recommendations of the Hearing Officer are adopted with the modifications discussed above.

2. Effective for any standard-offer contract executed after the issuance of this Order, the standard-offer price for existing hydroelectric plants under 30 V.S.A. § 8005a(p) shall be as determined in this order.

3. Pursuant to the requirements of 30 V.S.A. § 8005a(p)(3)(D), within three months of the calendar year end, Green Mountain Power Corporation or the Standard Offer Facilitator, in consultation with Green Mountain Power Corporation, shall submit a filing of broker quote data to the Commission for use in standard-offer contracts. The broker data shall include for the previous two years month-end bid price, ask price, and midpoint for the following three categories: Massachusetts Class II renewable energy credits; Connecticut Class I renewable energy credits; and Maine Existing Class II or Vermont Tier I renewable energy credits.

4. On or before November 15, 2019, in case number 19-3542-INV, participants shall file any recommendations with respect to the statutory criteria under 30 V.S.A. § 8005a(p)(3) for adjusting the standard-offer price for existing hydroelectric plants.

Dated at Montpelier, Vermont this 17th day of September, 2019.

Anthony Z. Roisman) PUBLIC UTILITY
)
)
Margaret Cheney) COMMISSION
)
)
Sarah Hoffmann) OF VERMONT

OFFICE OF THE CLERK

Filed: September 17, 2019

Attest: Judith C. Whitney
Clerk of the Commission

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

Appeal of this decision to the Supreme Court of Vermont must be filed with the Clerk of the Commission within 30 days. Appeal will not stay the effect of this Order, absent further order by this Commission or appropriate action by the Supreme Court of Vermont. Motions for reconsideration or stay, if any, must be filed with the Clerk of the Commission within 28 days of the date of this decision and Order.

PUC Case No. 18-0360-INV - SERVICE LIST

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