

STATE OF VERMONT
PUBLIC UTILITY COMMISSION

Case No. 17-3148-INV

2018 standard-offer prices for existing hydroelectric plants with a nameplate capacity of 5 MW or less	
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Order entered: 02/13/2018

**ORDER RE 2018 STANDARD-OFFER PRICES
FOR EXISTING HYDROELECTRIC PLANTS**

I. INTRODUCTION

Pursuant to 30 V.S.A. § 8005a(p)(3), the Vermont Public Utility Commission (“Commission”) is required to establish the standard-offer¹ price for existing hydroelectric plants at the lesser of \$0.08 per kWh (adjusted annually for inflation) or the sum of five elements identified in the statute.² In keeping with Section 8005a(p)(3)(B), in a previous Order, we determined the methodologies that the Commission would use to calculate each of the five statutory pricing elements, and established the standard-offer prices based upon those methodologies.³

Pursuant to Section 8005a(p)(4)(A), starting in 2014, the Commission is required to annually recalculate and adjust the energy and capacity elements of the standard-offer prices for application to all standard-offer contracts for existing hydroelectric plants, including contracts that have already been executed. In addition, pursuant to Section 8005a(p)(4)(B)(ii), the

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 Under Section 8005a(p)(3), the price of a standard offer contract shall be the lesser of the following:
(A) \$0.08 per kWh, adjusted for inflation annually commencing January 15, 2013 using the CPI;
or
(B) The sum of the following elements:
(i) a two-year rolling average of the ISO New England Inc. (ISO-NE) Vermont zone hourly locational marginal price for energy;
(ii) a two-year rolling average of the value of the plant’s capacity in the ISO-NE forward capacity market;
(iii) the value of avoided line losses due to the plant as a fixed increment of the energy and capacity values;
(iv) the value of environmental attributes, including renewable energy credits; and
(v) the value of a 10- or 20-year contract.

³ Docket 7874, Order of 2/7/13 (the “2013 Order”).

Commission may annually adjust the other three price elements for inclusion in future executed standard-offer contracts.

In this Order, pursuant to Section 8005a(p)(4)(A), we adjust both the energy and capacity elements of the price for application to all executed standard-offer contracts for existing hydroelectric plants. In addition, pursuant to Section 8005a(p)(4)(B)(ii), we make no adjustments to the other three price elements: (1) the value of environmental attributes; (2) the value of avoided line losses; or (3) the value of the long-term contracts.

II. BACKGROUND AND PROCEDURAL HISTORY

In the 2013 Order, the Commission established the standard-offer price for existing hydroelectric plants that was the sum of five elements identified in the statute, pursuant to Section 8005a(p)(3)(B). The actual price for a plant was based upon the methodologies for calculating each of the statutory pricing elements set out in the 2013 Order.

Pursuant to Section 8005a(p)(4)(A), 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.⁴ In addition, pursuant to Section 8005a(p)(4)(B)(ii), the Commission adjusted the environmental attributes element of the price for inclusion in future executed contracts. 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, and 2017, the Commission adjusted both the energy and capacity elements of the price for application to all executed standard-offer contracts for existing hydroelectric plants.⁵ 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.

The 2017 Order required participants in this proceeding to file any recommendations for adjusting the standard-offer prices for existing hydroelectric plants on or before October 16, 2017.

On October 16, 2017, the Vermont Department of Public Service (“Department”) filed comments recommending no changes for 2017.

⁴ Docket 7874, Order of 2/20/14 (“2014 Order”).

⁵ 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”).

No other participants filed recommendations on the statutory criteria.

III. DISCUSSION AND CONCLUSIONS

In the 2013 Order, pursuant to Section 8005a(p)(3)(B), we determined the methodologies for calculating each of the five statutory pricing elements. The five elements are: (1) the two-year rolling average of the ISO-NE Vermont zone hourly locational marginal price (“LMP”) for energy; (2) the two-year rolling average of the value of the plant’s capacity in the ISO-NE Forward Capacity Market (“FCM”); (3) the value of avoided line losses; (4) the value of environmental attributes; and (5) the value of a 10- or 20-year contract.

Pursuant to the Commission’s obligation under Section 8005a(p)(4)(A), we determine that the 2018 energy price element for all hydroelectric units will be 3.08 cents per kWh based upon the two-year rolling average of the ISO-NE Vermont zone hourly real-time LMP for calendar years 2016 and 2017.⁶ The energy price element is calculated with the same methodology used in our 2013, 2014, 2015, 2016, and 2017 Orders.⁷

In the 2013 Order, we determined that the capacity price element for each hydroelectric unit would be calculated by multiplying the ISO-NE capacity rating by the FCM clearing price for the appropriate period and dividing that revenue value by the kWh the plant generates.⁸ The FCM clearing price used to calculate the capacity price element is the payment rate received by generators in the forward capacity auction (“FCA”). In FCAs with excess capacity, this value represents the prorated clearing price, and in FCAs with no excess capacity this value represents the FCM clearing price.⁹ Accordingly, the average FCM clearing price to be used in determining the 2018 capacity price element is \$4.88 per kW-month based upon the two-year average payment rate for FCA 2016-2017 results and 2017-2018 results.¹⁰

⁶ The ISO-NE LMP values referenced in this Order were found at: <http://www.iso-ne.com/isoexpress/web/reports/pricing/-/tree/zone-info>.

⁷ The 2017 energy price element for all hydroelectric units was set at 3.44 cents per kWh.

⁸ An existing hydroelectric unit is categorized as either an ISO Settlements Only Generator (“ISO-SOG”) or a load reducer. If a unit is an ISO-SOG, then it will have FCM-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.

⁹ The two-year average payment rate for FCA 2015-2016 results and FCA 2016-2017 results was \$2.93 per kW-month.

¹⁰ FCA results are found at: <http://www.iso-ne.com/isoexpress/web/reports/auctions/-/tree/fcm-auction-results>.

In the 2013, 2014, 2015, 2016, and 2017 Orders, we 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 the utility's capacity reserve requirement. Given the absence of comments, we find no reason to change our previous rulings. Accordingly, for this Order, we require that the 15 percent adder to the capacity revenue value continue to be used for 2018 executed contracts for units that serve as load reducers.

Pursuant to Section 8005a(p)(4)(B)(i), the price elements of avoided line losses, environmental attributes, 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, except that the Commission may 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")¹¹ or loses such certification. Pursuant to Section 8005a(p)(4)(B)(ii), the Commission annually may adjust the three elements for inclusion in future executed contracts.

In the 2013, 2014, 2015, 2016, and 2017 Orders, we determined that the value for avoided line losses would be calculated as either 3 or 5 percent of the sum of the value of the energy and capacity elements. 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. Given the absence of comments, we find no reason to change our previous rulings. Accordingly, we determine that the value for avoided line losses shall remain at 3 or 5 percent for 2018 executed contracts.

In the 2014, 2015, 2016, and 2017 Orders, we determined that the environmental attribute values would be determined based on the renewable energy credits ("RECs") attributable to the plant's generation. The values are \$23 per MWh for LIHI-certified plants entering a 10-year contract, \$26 per MWh for LIHI-certified plants entering a 20-year contract, and \$1 per MWh for non-LIHI-certified plants whether entering a 10- or 20-year contract. Given the absence of

¹¹ 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.

comments, we find no reason to change our previous rulings. Accordingly, for this Order, the environmental attribute values shall remain at the 2017 values for 2018 executed contracts.

In the 2013, 2014, 2015, 2016, and 2017 Orders, we determined that a 5 percent adder to the value of the 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. Given the absence of recommendations to adjust the adder, we find no reason to change our previous rulings. Accordingly, for this Order, the contract adder values shall remain at 5 and 10 percent for 2018 executed contracts.

The 2018 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 are summarized below.

2018 Price Elements for Existing Hydroelectric Plants				
	10-Year Contract LIHI Certified	10-Year Contract	20-Year Contract LIHI Certified	20-Year Contract
Energy	3.08 cents/kWh	3.08 cents/kWh	3.08 cents/kWh	3.08 cents/kWh
Capacity	TBD	TBD	TBD	TBD
Avoided Line Losses	3% or 5%	3% or 5%	3% or 5%	3% or 5%
Environmental Attributes	2.3 cents/kWh	0.1 cents/kWh	2.6 cents/kWh	0.1 cents/kWh
Contract Adder	5%	5%	10%	10%

Note: The capacity price element for each hydroelectric unit shall be calculated by multiplying the ISO-NE capacity rating by the FCM payment price and dividing that revenue value by the kWh the plant generates. The capacity rating for an ISO-SOG is the FCM-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 FCM payment price for use in 2018 contracts is \$4.88 per kW-month. For load reducers a 15 percent adder shall be made to the capacity revenue value.

Pursuant to Section 8005a(p)(3)(A), the statutory cap of \$0.08 per kWh is required to be adjusted for inflation annually using the CPI. For 2017, the statutory cap was adjusted to \$0.084 per kWh. The CPI rose 2.1 percent in 2017.¹² For 2018, with the adjustment for the CPI, the statutory cap is \$0.086 per kWh.

Finally, as discussed above, Section 8005a(p)(4) requires that the Commission annually adjust the energy and capacity values determined in this Order. Accordingly, we require that

¹² The 2017 CPI can be found at: <https://www.bls.gov/cpi/tables/historical-cpi-u-201712.pdf>.

participants file, in case number 18-0360-INV, by November 15, 2018, any recommendations with regard to the values to be used for determining the energy and capacity elements of the price for both existing and future standard-offer contracts.

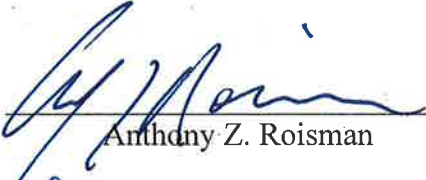
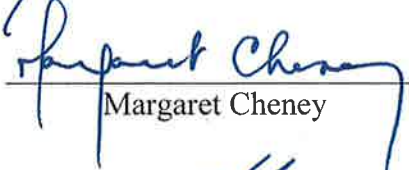

IV. ORDER

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

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

2. On or before November 15, 2018, in case number 18-0360-INV, participants shall file any recommendations with regard to the statutory criteria under 30 V.S.A. § 8005a(p)(3)(B) for adjusting the standard-offer price for existing hydroelectric plants.

Dated at Montpelier, Vermont this 13th day of February, 2018.

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

OFFICE OF THE CLERK

Filed: February 13, 2018

Attest: 
 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. 17-3148-INV - SERVICE LIST

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