

**STATE OF VERMONT
PUBLIC UTILITY COMMISSION**

Case No. 22-**-TF**

	)
Petition of Washington Electric	)
Cooperative, Inc. requesting an overall	)
rate increase of 14.19% to take effect on a	)
service-rendered basis commencing	)
November 1, 2022	)

**PREFILED TESTIMONY
OF
SHAWN ENTERLINE
ON BEHALF OF
WASHINGTON ELECTRIC COOPERATIVE**

Summary of Testimony

Mr. Enterline's testimony supports the level of power costs and the renewable energy credit (REC) revenues that are included in the revenue requirement. The following testimony is organized into six sections and is supported by eleven exhibits.

Sections

- I. Introduction
- II. Power Cost Drivers
- III. Resource Adjustments
- IV. Markets & Other Adjustments
- V. Transmission Adjustments
- VI. Summary

Exhibits

Exhibit WEC-SPE-1	Power Supply Adjustments
Exhibit WEC-SPE-2	Coventry Generation History
Exhibit WEC-SPE-3	HQUS Takeback Notice to VEC
Exhibit WEC-SPE-4	NYPA Generation History
Exhibit WEC-SPE-5	Ryegate & Sheffield Generation History
Exhibit WEC-SPE-6	Wrightsville Generation History
Exhibit WEC-SPE-7	Rate Year Energy Prices and Costs
Exhibit WEC-SPE-8	Rate Year Capacity Costs
Exhibit WEC-SPE-9	Rate Year REC Revenues
Exhibit WEC-SPE-10	NOATT Adjustments
Exhibit WEC-SPE-11	Schedule 21 GMP Forecast for WEC

Introduction

Q1. Please state your name and position.

A1. My name is Shawn Enterline, and I am a senior power supply analyst at the Vermont Public Power Supply Authority.

Q2. What is your educational and professional background?

A2. I hold a BS and MS in Economics from the Pennsylvania State University, where I specialized in forecasting electricity and natural gas demand. Since then, I have held a series of senior analytical and consulting positions. My utility experience includes Util Corporation, Pacific Gas and Electric, the Burlington Electric Department, and Green Mountain Power. My consulting experience includes government, non-profit advocacy and utility clients across the US and Canada while working for the Vermont Energy Investment Corporation and Dunskey Energy Consulting.

Q3. Have you previously testified before the Vermont Public Utility Commission?

A3. Yes, most recently in support of the Village of Enosburg Fall's 2020 Rate Case.

Q4. What is the purpose of your testimony?

A4. This testimony will support the level of power supply costs and Renewable Energy Credit (REC) revenues that are included in the revenue requirement.

II. Overview

Q5. Please summarize Washington Electric Cooperative's (WECs) power supply costs and REC revenues, as included in the revenue requirement.

A5. Please refer to Exhibit WEC-SPE-1, which shows the month-to-month power supply costs. Total power supply costs during the Test Year were \$8,495,999. After making known and measurable adjustments, power supply costs totaled \$9,199,616 during the Rate Year, which is a net \$703,618 (8.3%) increase from the Test Year. These totals also appear in WEC-1, Schedule 2, Power Supply.

Please refer to Exhibit WEC-SPE-9, which shows the month-to-month REC revenues. REC revenues during the Test Year totaled \$2,041,470. After making known and measurable adjustments, REC revenues during the Rate Year totaled \$2,070,064, which is a net increase of \$28,594 (1.4%). These totals also appear in WEC-1, Schedule 11, Other Revenues and Extraordinary Items.

Q6. Can you provide an overview of what is causing the increase?

A6. The increase is being primarily driven by higher energy market costs. Higher energy market costs are being caused by the increase in natural gas prices to New England. Because New England relies on Liquefied Natural Gas (LNG) during the winter months, the price of LNG has a direct impact on the price of electricity. The price of natural gas across North America has also increased because LNG is being exported at record levels. This is a secondary factor that is increasing New England's electricity prices during the rest of the year.

1 **Q7.** WEC's power sources are 100% renewable. Why does the price of LNG cause
2 increases in WEC's energy costs?

3 **A7.** As a load serving entity (LSE) in New England's power market, WEC must
4 purchase 100% of its energy requirements from the grid operator (ISO-NE). ISO-
5 NE uses auction mechanisms to set the price of electricity hourly, and it not only
6 sells electricity to LSE's like WEC, but also purchases electricity supplies from
7 them at substantially the same market prices. As a result, WEC's 100% renewable
8 power supply is sold to ISO-NE, and the proceeds act as a financial hedge against
9 the cost of buying WEC's energy needs from ISO-NE. Imbalances between supply
10 and demand are commonplace and are settled by ISO-NE at the prevailing market
11 price. In WEC's case, the imbalance is seasonal. During the winter months, WEC's
12 supply is less than its demand, and the reverse is true in the summer months. In this
13 way, the price of electricity in New England impacts the cost (and benefits) of
14 WEC's power supply.

15
16 **Q8.** **Are there any known and measurable changes that are decreasing WECs**
17 **power supply costs during the Rate Year?**

18 **A8.** Yes. Energy market revenues from each of WEC's power supply resources is
19 expected to increase, and this *decreases* WECs revenue requirement. The reason
20 for the increased energy market revenues is two-fold. First, energy supplies are
21 increasing in total because of increased generation from Coventry, HQUS and

1 Wrightsville. Second, higher energy market prices are increasing the value of all
2 generation.

3 Another decrease in power supply costs is caused by the capacity market.
4 Specifically, the cost of capacity is decreasing as a result of lower Forward Capacity
5 Market (FCM) clearing prices in the Rate Year.
6

7 **Q9. Are there any other noteworthy drivers of power supply costs?**

8 **A9.** Yes. The price of Vermont Tier I Renewable Energy Credits (RECs) is about
9 \$10/MWH, which is about double the cost in the Test Year. This is causing a
10 \$263,790 increase in costs during the Rate Year.
11

12 **Q10. Net metering has been a source of increasing power supply costs for WEC in**
13 **the past. Can you explain how net metering is impacting WEC's costs in this**
14 **proceeding?**

15 **A10.** WEC is accounting for the impact of net metering separately from power supply.
16 Please refer to WEC-1, Schedule 16 for the impacts of net metering.
17

18 **III. Resource Adjustments**

19 **Q11. Please summarize the impact that Rate Year resource adjustments have on**
20 **power supply costs.**

21 **A11.** In total, resource adjustments decrease power supply costs by \$4,201,231.
22

1 **Q12. Are there any adjustments that apply to all of WEC's resources?**

2 **A12.** Yes. Every one of WEC's resources settles (or in Wrightsville's case, is deemed
3 to be settled) in ISO-NE's energy and/or capacity markets. As a result, the
4 adjustments that are made to energy and capacity prices impact almost every
5 resource. These price-related adjustments are explained in detail in the Markets
6 Adjustments section, and their dollar impacts are shown explicitly in Exhibit WEC-
7 SPE-1 in the Rate Year columns. However, for brevity, these adjustments are not
8 explained separately for each and every resource in the following section. Instead,
9 this section focuses on adjustments to the MWH Entitlements (Column E of Exhibit
10 WEC-SPE-1), the price adjustments (if any) to the resources, and other relevant
11 adjustments.

12
13 **Q13. Please summarize the Rate Year adjustments to the Coventry Landfill.**

14 **A13.** Please refer to Exhibit WEC-SPE-1 and WEC-SPE-2. The cost of the Coventry
15 Landfill decreases by \$4,397,951. Generation was adjusted upward to the midpoint
16 (50,561 MWH/Year) between the thirteen-year average deliveries under the
17 contract and the Test Year actuals. The thirteen-year average was chosen because
18 it includes almost all of the generation data since the fifth engine was installed at
19 the landfill (June 2009). The test year data was chosen because it reflects the below-
20 average generation that is resulting from construction and other changes to the
21 landfill itself. This below-average generation required WEC to purchase
22 additional, more expensive power during the test year. Ex. WEC 1 at F 19 and D 7.

1 The price of the contract was held constant at \$38.15 per MWH. This matches the
2 last month of actual data from the Test Year and is expected to be the price that is
3 in effect at least through the end of 2022. Note that the Capacity Credits decrease
4 because the resource is priced at the applicable FCM clearing price.

5
6 **Q14. Please summarize the Rate Year adjustments to the HQUS PPA.**

7 **A14.** WEC is among the Vermont utilities that holds a contractual entitlement to the
8 HQUS contract. WEC's portion of the HQUS contract amounts to 4 MW of 7x16
9 energy, and it continues through October 2038. However, since its inception in
10 2011, WEC has been passing through 100% of its entitlement in the contract to the
11 Vermont Electric Cooperative (VEC) through a suballocation agreement.
12 The suballocation agreement includes provisions for WEC to take back some or all
13 of the energy if the ratio of its supply to its demand falls below 97%. This provision
14 was triggered this past year, and WEC subsequently gave notice to VEC of its
15 intention to take back 2 MW of the contractual entitlement effective June 2023. As
16 a result, 2 MW of 7x16 energy (4,896 MWH) and Tier I RECs has been added to
17 the Rate Year starting June 2023 at the current HQUS contract price of
18 \$57.01/MWH. Please refer to Exhibit WEC-SPE-3 for a copy of the notice letter to
19 VEC.

20
21 **Q15. Please summarize the Rate Year adjustments to the New York Power**
22 **Authority (NYPA) PPAs.**

1 **A15.** Please refer to Exhibit WEC-SPE-4. The generation from the NYPA Niagara and
2 NYPA St. Lawrence resources have been set to the fifteen-year average, 2007-
3 2021, as determined by invoice data. This results in net decrease of 866 MWH
4 during the Rate Year. The energy rate (\$4.92/MWH) and capacity charges have
5 been held constant during the Rate Year. Note, however, that the Capacity Credits
6 decrease because the resource is priced at the applicable FCM clearing price.

7
8 **Q16.** **Please summarize the Rate Year adjustments to the Ryegate resource.**

9 **A16.** Please refer to Exhibit WEC-SPE-5. The generation from the Ryegate resource has
10 been set to the fifteen-year average, 2007-2021, as determined by ISO-NE
11 settlement reports. WEC's 1.47% entitlement to the resource equates to 2,267
12 MWH during the Rate Year, an increase of five MWH from the Rate Year. The
13 price of the resource is set equal to the last month of the Test Year, at
14 \$107.27/MWH.

15
16 **Q17.** **Please summarize the Rate Year adjustments to the Sheffield Wind PPA.**

17 **A17.** Please refer to Exhibit WEC-SPE-5. The generation from the Sheffield Wind PPA
18 has been set to the nine-year average, 2013-2021, as determined by ISO-NE
19 settlement reports. (Note that 2013 was the first year after the project was
20 commissioned.) WEC's 10% entitlement to the resource equates to 8,065 MWH
21 during the Rate Year. This is a net decrease of 54 MWH from the Test Year. The
22 price of the resource is set equal to the last month of the Test Year, \$70.43/MWH,

1 but increases to \$71.31/MWH beginning 1/1/23 to reflect the 2023 price in
2 Amendment 2 of the PPA.

3 **Q18. Please summarize the Rate Year adjustments to Short Term Coverage.**

4 **A18.** No adjustments have been made to Short Term Coverage. These transactions are
5 made on a month-ahead basis and have not yet been contracted. Therefore, there is
6 no basis for an adjustment.

7
8 **Q19. Please summarize the Rate Year adjustments to the Wrightsville Hydro.**

9 **A19.** Please refer to Exhibit WEC-SPE-6. The generation from the Wrightsville Hydro
10 has been set to the twenty-two-year average (2,651 MWH), 2000-2021, as
11 determined by VPPSA's metering database. This average includes a de minimis
12 adjustment to match WEC's accounting records, and importantly, it also includes a
13 six percent decrease to reflect the terms of the recently approved Water Quality
14 Certificate (WQC) with the Vermont Agency of Natural Resources (ANR). The
15 resulting adjustment equates to 2,492 MWH in the Rate Year, which is a 1,446
16 MWH increase from the Test Year (1,050 MWH).

17 The Wrightsville Hydro does not participate in ISO energy or capacity markets.
18 However, for the purposes of the Rate Year, we are showing the resource as if it
19 was settled in the energy market. This enables us to keep the Test Year load
20 obligation (Real Time Load Obligation or "RTLO") constant in the Rate Year.
21 Because Wrightsville's Test Year generation is already reflected in the Rate Year
22 load obligation, only the value of the additional generation is accounted for in

WEC-SPE-1. This calculation is shown on page 2 of WEC-SPE-6. In summary, 1,446 MWH is added to the Rate Year generation at a value of (\$181,832). This is the adjustment to the Rate Year power supply costs.

IV. Markets & Other Adjustments

Q20. Please summarize the impact that Rate Year Markets & Other Adjustments have on power supply costs.

A20. For power supply costs, three adjustments are proposed: an energy market adjustment, a capacity market adjustment, and a REC Purchases adjustment. These adjustments increase power supply costs by \$4,901,326.
For REC Revenues, the adjustment totals \$28,594.

Q21. Please summarize the adjustments to energy market costs.

A21. Please refer to Exhibit WEC-SPE-1 and WEC-SPE-7. The cost of energy at the Vermont Zone increases by \$5,053,010. This is a result of higher energy market prices during the Rate Year. The adjustment to energy market prices is calculated by using the average settlement prices during the month of August 2022 as reported by ICAP brokerage reports. These prices are about 84% higher than comparable prices during the Test Year.

1 **Q22. Please summarize the adjustments to capacity market costs.**

2 **A22.** Please refer to Exhibit WEC-SPE-1 and WEC-SPE-8. The cost of capacity in the
3 Forward Capacity Market is \$631,383, which is a \$415,474 decrease from the Test
4 Year. This is a result of a of lower capacity market prices.

5
6 **Q23. Please explain why the cost of capacity is decreasing in the Rate Year.**

7 **A23.** Capacity market prices are set by an auction mechanism three years in advance of
8 the operating year. As a result, the price of capacity is known for the Rate Year.
9 Specifically, the price of capacity during the Test Year peaked at \$4.63/kW-month,
10 and during the Rate Year it will drop from \$3.80/kW-month to \$2.00/kW-month.

11
12 **Q24. Please summarize the adjustments to REC Purchases.**

13 **A24.** Please refer to Exhibit WEC-SPE-1. WEC's REC purchases are for Vermont Tier
14 I RECs. The volumes in the Test year are reduced by the amount of the HQUS
15 contract in the Rate Year. This results in a purchase volume of 55,104 MWH. Tier
16 I REC prices are presently \$10/MWH according to GT Environmental, and this
17 results in \$551,040 in REC Purchases during the Rate Year, a \$263,790 increase
18 from the Test Year.

19
20 **Q25. Please summarize the adjustments to REC Revenues.**

21 **A25.** Please refer to WEC-SPE-9. Please note that WEC records REC revenues
22 separately from power supplyl, and that these revenues are not included in WEC-

1 SPE-1. Instead, these revenues are shown in Schedule 11, Other Revenues and
2 Extraordinary Items.

3 During the Test Year, WEC recorded \$2,041,470 in revenue. This reflects 58,953
4 MWH of sales at an average price of \$34.63/MWH. During the Rate Year, WEC
5 expects REC revenues to total \$2,070,064. This number is made up of two parts.
6 First, WEC has already sold 50,000 MWH at known prices. This represents 82%
7 of the total for the Rate Year. Second, the remaining RECs are valued at an average
8 of \$35.66/MWH, which reflects the most recent broker prices from GT
9 Environmental.

10
11 **V. Transmission Adjustments**

12 **Q26. Please summarize the impact that Rate Year Transmission Adjustments have**
13 **on power supply costs.**

14 **A26.** Please refer to WEC-SPE-1. The cost of transmission increases by \$3,522 in the
15 Rate Year. Please note that the Test Year peak loads have been held constant for
16 the purposes of these adjustments.

17
18 **Q27. Please summarize the adjustments to the NEPOOL Open Access Transmission**
19 **Tariff (NOATT) rates.**

20 **A27.** Please refer to WEC-SPE-10. The cost of RNS transmission decreases by \$25,457
21 in the Rate Year. This is a result of lower Schedule 9 charges as reported by the
22 PTO-AC committee.

1 **Q28. Please summarize the adjustments to GMP's Schedule 21 rates.**

2 **A28.** Please refer to WEC-SPE-11. The cost of GMP's Schedule 21 transmission
3 increases by \$28,979. The rates and billing determinants were set equal to GMP's
4 2022 Schedule 21 Forecast for WEC as of January 18, 2022.

5
6 **VI. Summary**

7 **Q29. Please summarize the adjustments to power supply and REC revenues.**

8 **A29.** Total power supply costs increase from \$8,495,999 to \$9,199,616, which is a net
9 \$703,618 (8.3%) increase from the Test Year. The primary reason for this increase
10 is high natural gas prices and their impact on electricity prices, particularly during
11 the winter months.

12
13 **Q30. Does this conclude your testimony?**

14 **A30.** Yes.

15
16
17
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19

1 **WASHINGTON ELECTRIC COOPERATIVE, INC.**
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3

4 Shawn Enterline

5 Shawn Enterline, Senior Power Supply Analyst
6 Vermont Public Power Supply Authority
7

8 At Waterbury, Vermont, this 15th day of September 2022, Shawn Enterline personally
9 appeared before me and acknowledged that the facts and matters contained herein are true to the best
10 of his knowledge, information, opinion, and belief, and that he executed the foregoing document as
11 his free act and deed.
12

13 

14 Notary Public

15 My Commission Expires 1/31/23