

**BEFORE THE PUBLIC UTILITY COMMISSION  
OF OREGON**

UE 335

In the Matter of

PORTLAND GENERAL ELECTRIC  
COMPANY,

Request for a General Rate Revision.

ORDER

DISPOSITION: NET VARIABLE POWER COST STIPULATION ADOPTED

**I. SUMMARY**

In this order, we adopt the stipulation of the parties regarding Portland General Electric Company's 2019 proposed Net Variable Power Costs (NVPC). This decision addresses one part of this docket, which includes all issues related to PGE's general revision of rates. To date, five separate stipulations have been filed in this docket; four concern issues associated with the general rate case, and the stipulation we adopt here addresses NVPC issues.

**II. PROCEDURAL HISTORY**

On February 15, 2018, PGE filed its forecast of the company's 2019 NVPC as part of its general rate case filing. PGE subsequently updated the NVPC forecast on March 30 and July 6, 2018.

Following a workshop to discuss PGE's power cost forecasting model (MONET), additional rounds of testimony, and three settlement conferences, the parties reached a settlement of issues related to PGE's NVPC. On August 22, 2018, the parties submitted a stipulation for our review. The stipulation is attached as Appendix A, and supported by Portland General Electric Company, Staff of the Public Utility Commission of Oregon, the Oregon Citizens' Utility Board (CUB), and the Alliance of Western Energy Consumers (AWEC). The stipulation and supporting testimony are admitted as evidence in this proceeding.

### III. BACKGROUND

Annually, PGE files its forecast of the company's upcoming NVPC. NVPC include wholesale power purchases and sales, fuel costs, and other costs that generally change as power output changes. The updated power cost forecast must be filed and updated consistent with the requirements of PGE's Tariff Schedules 125 and 128, prior to the November direct access window.

In its first filing, PGE presented its initial 2019 NVPC forecast of \$375.3 million, or \$20.62 per MWh. The initial 2019 NVPC forecast is \$39 million more than the 2018 forecast described in PGE's recent general rate case proceeding, docket UE 319. In that proceeding, the 2018 NVPC forecast was \$336 million, or \$18.31 per MWh. In its most recent update of July 6, 2018, PGE revised its NVPC forecast upward to \$384.1 million, an increase of roughly \$9 million from its initial filing and approximately \$47 million more than the final estimate for PGE's last rate case.

### IV. STIPULATION ADDRESSING NVPC ISSUES

The stipulation addressed nine primary issues identified by the parties in opening testimony and settlement discussions. We summarize those issues below.

#### A. **Western Energy Imbalance Market ("Western EIM"), California-Oregon Border (COB) Trading Margins, Wind Capacity Factor and Market Curve and Hedging Issues**

##### *1. Parties' Original Positions*

In its opening testimony, Staff argued that PGE did not clearly express expected benefits PGE would receive from its participation in the Western EIM, the balancing energy market that allows participants to efficiently serve customer demands within and between Balance Authority Areas through sub-hourly transactions. Staff also proposed changes to PGE's methodologies that forecast COB trading margins, attempting to account for daily variation in prices and historical transactions. Both Staff and AWEC also objected to PGE's wind capacity factor modeling, arguing that PGE has consistently over-estimated capacity factors for wind. Staff and AWEC proposed alternatives for calculating expected wind capacity factors to address these concerns. In addition, AWEC argued that PGE over-stated forward market prices, and recommended a reduction in market forward prices.

## 2. *Stipulated Agreement*

PGE agrees to reduce power costs by \$4.5 million in a settlement over EIM participation, COB trading margins, wind capacity factor and market forward curve/hedging issues. In response to the concerns of parties, PGE commits to explain to Staff how dispatch cost savings and flexible reserve savings are captured in PGE's EIM benefit results and why PGE is unable to separate the two. PGE will also work to increase the granularity of projected COB margins, and improving modeling. Finally, as part of the parties' agreements on these issues, PGE will not oppose a request to open an investigation on the modeling of capacity factors for wind resources, and will not change its modeling of market forward price curves or its hedging strategy.

### B. **Online Dates for Qualifying Facilities (QFs)**

#### 1. *Parties' Original Positions*

AWEC and CUB challenged PGE's modeling of QFs in MONET. PGE models QF contracts to begin production based on the contract's Commercial Operation Date (COD), which is selected by the power purchase agreement (PPA) seller. Under PGE's current methodology, if a QF PPA has an expected COD on or before December 31, 2019, then the associated QF energy and payments get included in the 2019 NVPC forecast. AWEC and CUB advocated for use of the Contract Delay Rate method approved for PacifiCorp's 2018 Transition Adjustment Mechanism for this metric. Staff supported PGE's preferred method, with some proposed modifications.

#### 2. *Stipulated Agreement*

The parties agreed to a method for tracking and truing up the on-line dates for QFs, consistent with that described in PGE Exhibit 300, but accounting for Staff's modifications as described in Staff Exhibit 200. PGE represents that it does not possess the type of historical data necessary to utilize the Contract Delay Rate method. Parties agreed to the settlement with the understanding that PGE's QF exposure is "temporary in nature." If PGE's QF costs are not temporary in nature, some parties indicate they will advocate in the future for the application of the Contract Delay Rate method or an alternative method.

**C. PGE's Firm Capacity Agreement in the NVPC****1. Parties' Original Positions**

The parties raised an issue regarding a PPA that PGE entered into with a counterparty for firm capacity totaling 100 MW and backed by a physical resource. PGE procured this contract consistent with the Commission directive in dockets LC 66 and UM 1892, and included it in the 2019 NVPC forecast. Staff questioned the inclusion of PGE's Firm Capacity Agreement costs in the NVPC, in part because they did not have access to the financial analysis backing the agreements.

**2. Stipulated Agreement**

The parties agree to the inclusion and timing of including PGE's firm capacity agreement executed in the NVPC, consistent with docket UM 1892. PGE also agrees to provide Staff access to financial analysis backing the agreement.

**D. Production Tax Credits (PTC) Rate****1. Parties' Original Positions**

AWEC expressed concerns with the PTC price that PGE put in the 2019 NVPC forecast and the PTC customer benefits related to the timing of the Biglow 2 in-service phase-in. Consistent with that concern, AWEC recommended increasing the PTC per kilowatt-hour rate and adjusting the PTC phase out timing associated with Biglow 2.

**2. Stipulated Agreement**

The parties agree that PGE would update the PTC rate consistent with the most current forecast of the applicable Gross Domestic Product deflator available prior to PGE's November 6, 2018 MONET update. The parties also agree that no change in MONET's modeling would be made to the PTC phase out for Biglow 2.

**E. BPA Wheeling Costs****1. Parties' Original Positions**

AWEC argued that PGE's proposed BPA escalation rate to wheel generation supply was inaccurate for the period October 1, 2019 through December 31, 2019. Consistent with the outcome of BPA's 2018 rate case and the uncertainty over transmission rates that are

to be established in BPA's 2020 rate case, AWEC recommended that PGE maintain BPA wheeling rates at their current level.

**2. *Stipulated Agreement***

The parties agree that PGE will replace its escalation factor used for BPA wheeling and use a flat increase of \$500,000 for the period between October 1, 2019, and December 31, 2019.

**F. Carty Gas Supply Infrastructure**

In opening testimony, Staff criticized the gas delivery costs associated with the Carty facility, and requested data related to the sizing of delivery infrastructure as related to the annual supply needs of the facility. Specifically, Staff questioned PGE's decision on the size of the 25-mile pipeline from the Gas Transmission Northwest mainline to Carty Lateral. Staff proposed a reduction in PGE's 2019 NVPC forecast associated with the capacity of the Carty Lateral exceeding Carty's fuel needs.

**G. MONET Code Review**

**1. *Parties' Original Positions***

CUB raised concerns about the MONET tool, which is several decades old, and has unused spreadsheets and source codes. CUB proposed that an independent consultant be hired to suggest potential maintenance actions for the model.

**2. *Stipulated Agreement***

The parties agree to PGE's proposal to review the MONET code. PGE will hold a workshop, and if concerns remain after the workshop, PGE intends to work with parties to determine the proper parameters for further analysis and identification of a consultant or consultants to address any remaining concerns. The costs of any consultant engaged would be deferred for later rate recovery.

**H. North Mist Expansion Project (NMEP)**

**1. *Parties' Original Positions***

PGE entered into an agreement with NW Natural Gas Company for long-term gas storage services from NMEP in 2012. PGE argues that the gas storage services from NMEP will

help provide a more flexible and lower cost supply solution than alternatives. The project is not in-service and has experienced delays. Staff argued that PGE should update the NMEP expected in-service date in future 2019 NVPC updates, including the final NVPC update scheduled for November 15, 2018.

## **2. *Stipulated Agreement***

The parties agree with PGE that the NMEP expense forecast is reasonable, and PGE will continue to update the in-service date through the final NVPC update.

### **I. *Headwater Benefits Study (HWBS)***

Under the “Pacific Northwest Coordination Agreement,” the Northwest Power Pool conducts an 80-year regulation study called the Headwater Benefits Study (HWBS). The model produces a simulated regulation of 80 water years under historical stream flows that PGE uses to develop the average hydro energy inputs to MONET.

PGE provided Staff with an electronic copy of material in support of PGE’s proposed change to the NVPC forecast associated with correcting and including the results of the 2016-2017 HWBS. The parties express satisfaction in testimony with PGE’s process and documentation and agree with PGE’s decision to include the corrected 2016-2017 HWBS for establishing average expected base outputs for PGE’s hydro resources. PGE incorporated the corrected 2016-2017 HWBS into its July 6, 2018 NVPC update.

## **V. *DISCUSSION***

We find that the stipulation is supported by sufficient evidence in the record, appropriately resolves the issues in this case, and will result in just and reasonable rates. Staff, CUB, and AWECC conducted a thorough investigation of the company’s testimony and exhibits, served numerous data requests, participated in settlement conferences, and filed insightful testimony. The stipulation resolves all NVPC issues in this proceeding. No person has filed an objection to the stipulation.

We have examined the stipulation, the testimony supporting the stipulation, and the pertinent record in the case. We find that the stipulation is supported by the record, which includes the company’s testimony and exhibits, Staff and parties’ testimony, and the joint testimony supporting the stipulation. We therefore conclude that the stipulation represents a just and reasonable resolution of the issues presented in this docket.

Finally, we note that the stipulation includes a number of commitments of future action on behalf of PGE to address Staff or other party concerns, and to provide Staff with

additional information. We emphasize here that these commitments for future action, analysis, and the provision of additional information are important elements to the stipulation, and support our finding that the stipulation represents a just and reasonable resolution of issues.

## VI. ORDER


IT IS ORDERED that:

1. The stipulation between Portland General Electric Company, Staff of the Public Utility Commission of Oregon, the Citizens' Utility Board of Oregon, and the Alliance of Western Energy Consumers, attached as Appendix A, is adopted.
2. Portland General Electric Company must file its final MONET run on or before November 15, 2018.

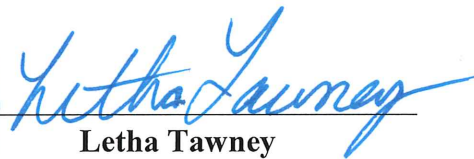
Made, entered, and effective OCT 17 2018.



**Megan W. Decker**  
Chair



**Stephen M. Bloom**  
Commissioner



**Letha Tawney**  
Commissioner

A party may request rehearing or reconsideration of this order under ORS 756.561. A request for rehearing or reconsideration must be filed with the Commission within 60 days of the date of service of this order. The request must comply with the requirements in OAR 860-001-0720. A copy of the request must also be served on each party to the proceedings as provided in OAR 860-001-0180(2). A party may appeal this order by filing a petition for review with the Court of Appeals in compliance with ORS 183.480 through 183.484.

BEFORE THE PUBLIC UTILITY COMMISSION  
OF OREGON

UE 335

In the Matter of

PORTLAND GENERAL ELECTRIC  
COMPANYRequest for a General Rate Revision.NET VARIABLE POWER COST  
STIPULATION

This Net Variable Power Cost Stipulation ("Stipulation") is between Portland General Electric Company ("PGE"), Staff of the Public Utility Commission of Oregon ("Staff"), the Citizens' Utility Board of Oregon ("CUB"), and the Alliance of Western Energy Consumers ("AWEC") (collectively, the "Stipulating Parties").

PGE filed this general rate case on February 15, 2018. The filing included thirteen separate pieces of testimony and exhibits. PGE also provided to Staff and other parties voluminous work papers in support of its filing. Since that time, Staff and intervening parties have analyzed PGE's filing and work papers, and submitted more than 520 data requests obtaining additional information. Two schedules were set by the Administrative Law Judge in this matter: one for net variable power cost ("NVPC") issues, and the other for general rate case issues. Pursuant to the schedules, a NVPC workshop was held on April 17, 2018, and parties filed opening testimony on NVPC issues on May 24, 2018. PGE filed reply testimony on June 21, 2018. A workshop and settlement conference for NVPC issues were held on June 12 and June 28, 2018. As a result of those discussions, the Stipulating Parties have reached a compromise settlement of all NVPC issues, as described in detail below. No other parties raised issues in this docket regarding NVPC.



**TERMS OF PARTIAL STIPULATION**

1. This Stipulation resolves all NVPC issues raised in this docket.
2. Western Energy Imbalance Market (“Western EIM”), California-Oregon Border (COB) Trading Margins, Wind Capacity Factor, and Market Curves/Hedging Strategy. Forecast power costs will be reduced by \$4.5 million in a compromise settlement of the Western EIM, COB trading margins, wind capacity factor, and market forward curves/hedging strategy issues raised in this docket. In addition, the Stipulating Parties agree to the following:
  - a. PGE will provide Staff information through a data response detailing how both base dispatch cost savings and flex reserve savings are captured in PGE’s actual Western EIM benefit results and why PGE is unable to separate the two.
  - b. PGE will continue to investigate methods to increase the granularity and improve the modeling of COB margins.
  - c. PGE agrees that it will not oppose a request for an investigation into the modeling of capacity factors for wind resources.
3. Qualifying Facilities. The Stipulating Parties agree to the adoption of the method to track and true-up the on-line dates for Qualifying Facilities (“QF”) described in PGE Exhibit 300, with Staff’s modifications as outlined in Staff Exhibit 200. The method is:
  - a. PGE will update the QF Commercial Operation Dates (“COD”) through the final MONET update in each year’s power cost proceeding.<sup>1</sup>

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<sup>1</sup> For years without general rate cases, this would apply to PGE’s Annual Update Tariff (AUT filing).

- b. PGE will file deferred accounting applications to defer the difference between actual and forecasted QF costs to recover or credit the variance in QF costs in the next power cost proceeding.
  - c. PGE will include any cure period payments within the proposed methodology.
  - d. As described in PGE Exhibit 300, the variance to be refunded or collected from customers will be determined by re-running the final November 15 NVPC MONET forecast and replacing the estimated QF CODs with actual recorded CODs.
4. Headwater Benefits Study. The Stipulating Parties are satisfied with PGE's process and documentation and agree to the inclusion of the corrected 2016-2017 Headwater Benefits Study for establishing average expected base outputs for PGE's hydro resources in this docket. PGE has incorporated the corrected 2016-2017 Headwater Benefits Study into the July 6, 2018 NVPC update.
5. Capacity Agreement. The Stipulating Parties agree to the inclusion in NVPC of PGE's firm capacity agreement, executed pursuant to the outcome of Docket No. UM 1892. PGE will provide Staff access and the ability to review the financial analysis that PGE conducted for this capacity agreement.
6. Production Tax Credits. The Stipulating Parties agree that PGE will update the Production Tax Credit ("PTC") rate pursuant to the most current forecast of the applicable Gross Domestic Product deflator available prior to PGE's November 6, 2018, MONET update. The parties agree to no change in MONET's modeling of the PTC phase-out for Biglow 2.
7. BPA Wheeling Rate. PGE will replace the proposed escalation factor used for BPA wheeling with a flat increase of \$500,000 for the period between October 1, 2019, and December 31, 2019.

8. Carty Gas Supply Costs. There will be no adjustment for Carty gas supply costs. PGE will provide Staff the following:
- a. The compressor horsepower required to bring Carty inlet gas pressure under a 16-inch diameter pipeline up to minimum operating requirements at Carty (Option A);
  - b. The compressor horsepower, if any, required to bring Carty inlet gas pressure under a 20-inch diameter pipeline up to minimum operating requirements at Carty (Option B); and
  - c. A comparison, using the cost assumptions from PGE's Carty Lateral cost estimates, as provided in Staff/303, Kaufman/367-369, the cost of a 16-inch diameter pipeline with both a single and redundant compressor sized as described above ("Option A") with the cost of a 20-inch diameter pipeline with a single and redundant compressor, if any, as sized above ("Option B").
9. MONET Code Review. The Stipulating Parties agree to PGE's proposal put forth in PGE Exhibit 1400 regarding review of the MONET code. PGE will host a workshop to provide CUB and other interested parties an in-depth overview of the MONET model and work collaboratively with parties to address any concerns. If concerns remain after the workshop, PGE will work with Parties to determine the proper parameters requiring further analysis and identification of a third-party consultant(s) to address the remaining concerns. In the event that a consultant is engaged, Parties agree to allow PGE to defer any costs involved in conducting the third-party review, subject to an earnings review.
10. North Mist. The Stipulating Parties agree that the North Mist Expansion Project expense forecast is reasonable. PGE will continue to update the in-service date of the North Mist Expansion Project through the final NVPC update scheduled on November 15, 2018.


11. The Stipulating Parties recommend and request that the Commission approve the adjustments and provisions described herein as appropriate and reasonable resolutions of the identified issues in this docket.
12. The Stipulating Parties agree that this Stipulation is in the public interest, and will contribute to rates that are fair, just and reasonable, consistent with the standard in ORS 756.040.
13. The Stipulating Parties agree that this Stipulation represents a compromise in the positions of the Stipulating Parties. Without the written consent of all of the Stipulating Parties, evidence of conduct or statements, including but not limited to term sheets or other documents created solely for use in settlement conferences in this docket, are confidential and not admissible in the instant or any subsequent proceeding, unless independently discoverable or offered for other purposes allowed under ORS 40.190.
14. The Stipulating Parties have negotiated this Stipulation as an integrated document. The Stipulating Parties, after consultation, may seek to obtain Commission approval of this Stipulation prior to evidentiary hearings. If the Commission rejects all or any material part of this Stipulation, or adds any material condition to any final order that is not consistent with this Stipulation, each Stipulating Party reserves its right: (i) to withdraw from the Stipulation, upon written notice to the Commission and the other Parties within five (5) business days of service of the final order that rejects this Stipulation, in whole or material part, or adds such material condition; (ii) pursuant to OAR 860-001-0350(9), to present evidence and argument on the record in support of the Stipulation, including the right to cross-examine witnesses, introduce evidence as deemed appropriate to respond fully to issues presented, and raise issues that are incorporated in the settlements embodied in this

Stipulation; and (iii) pursuant to ORS 756.561 and OAR 860-001-0720, to seek rehearing or reconsideration, or pursuant to ORS 756.610 to appeal the Commission's final order. Nothing in this paragraph provides any Stipulating Party the right to withdraw from this Stipulation as a result of the Commission's resolution of issues that this Stipulation does not resolve.

15. This Stipulation will be offered into the record in this proceeding as evidence pursuant to OAR 860-001-0350(7). The Parties agree to support this Stipulation throughout this proceeding and in any appeal, and provide witnesses to support this Stipulation (if specifically required by the Commission), and recommend that the Commission issue an order adopting the settlements contained herein. By entering into this Stipulation, no Stipulating Party shall be deemed to have approved, admitted or consented to the facts, principles, methods or theories employed by any other Stipulating Party in arriving at the terms of this Stipulation. Except as provided in this Stipulation, no Stipulating Party shall be deemed to have agreed that any provision of this Stipulation is appropriate for resolving issues in any other proceeding.
16. This Stipulation may be signed in any number of counterparts, each of which will be an original for all purposes, but all of which taken together will constitute one and the same agreement.

ORDER NO. 18 405

DATED this 21<sup>st</sup> day of August, 2018.

  
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PORTLAND GENERAL ELECTRIC  
COMPANY

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STAFF OF THE PUBLIC UTILITY  
COMMISSION OF OREGON

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CITIZENS' UTILITY BOARD  
OF OREGON

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ALLIANCE OF WESTERN  
ENERGY CONSUMERS

ORDER NO. **18 405**

DATED this 21<sup>st</sup> day of August, 2018.

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PORTLAND GENERAL ELECTRIC  
COMPANY

*P.P. Kaylie Klein*  
STEPHANIE ANDRUS

STAFF OF THE PUBLIC UTILITY  
COMMISSION OF OREGON

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CITIZENS' UTILITY BOARD  
OF OREGON

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ALLIANCE OF WESTERN  
ENERGY CONSUMERS

ORDER NO. 18 405

DATED this 21<sup>st</sup> day of August, 2018.

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PORTLAND GENERAL ELECTRIC  
COMPANY

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STAFF OF THE PUBLIC UTILITY  
COMMISSION OF OREGON



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CITIZENS' UTILITY BOARD  
OF OREGON

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ALLIANCE OF WESTERN  
ENERGY CONSUMERS



ORDER NO. 18 405

DATED this 17<sup>th</sup> day of August, 2018.

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PORTLAND GENERAL ELECTRIC  
COMPANY

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STAFF OF THE PUBLIC UTILITY  
COMMISSION OF OREGON

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CITIZENS' UTILITY BOARD  
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ALLIANCE OF WESTERN  
ENERGY CONSUMERS