

March 18, 2019

VIA ELECTRONIC FILING

 Public Utility Commission of Oregon
 201 High Street SE, Suite 100
 Salem, OR 97301-3398

Attn: Filing Center

RE: UM 1910—Updated Values for Resource Value of Solar Calculation

PacifiCorp d/b/a Pacific Power submits to the Public Utility Commission of Oregon (Commission) its initial set of Resource Value of Solar (RVOS) values. On January 22, 2019, the Commission issued Order No. 19-021, adopting a final methodology for PacifiCorp’s utility-specific calculation of RVOS values. PacifiCorp calculated each element of the RVOS consistent with the Commission’s directives for finalizing the specific elements that comprise the RVOS values. PacifiCorp provides a brief summary of its calculation of each element below and the accompanying supporting materials will be provided electronically to puc.workpapers@state.or.us and served on the parties in this docket.

The following table shows the final value for each RVOS element, as calculated consistent with Order No. 19-021:

Element	Real Value (\$/MWh)	Nominal Value (\$/MWh)
IEnergy	\$20.18	\$24.77
Generation Capacity	\$24.23	\$29.75
T&D Capacity Deferral	\$1.94	\$2.38
Line Losses	\$1.40	\$1.72
Integration	\$(0.63)	\$(0.77)
Administration	\$(1.98)	\$(2.43)
Market Price Response	\$(0.04)	\$(0.05)
Hedge Value	\$1.01	\$1.24
Environmental Compliance	\$4.14	\$5.09
RPS Compliance	\$0.60	\$0.73
Grid Services	\$0.00	\$0.00
RVOS Total Value	\$50.86	\$62.44
Utility Scale Proxy (2017 IRP OR Solar Resource)	\$43.61	\$53.54

Avoided Energy

The Commission adopted PacifiCorp's approach for calculating the avoided energy value based on standard non-renewable qualifying facility (QF) avoided costs and directed PacifiCorp to use uncapped energy imbalance market data for price shaping. PacifiCorp updated this value to reflect values from the currently approved standard avoided cost rates¹ and the scalars have been updated to reflect values from the three years ending in December 2018, with no caps. PacifiCorp has also expressed the avoided energy results in 12x24 blocks, as this information was already available from the RVOS Template.²

Generation Capacity

The Commission adopted PacifiCorp's Public Utilities Regulatory Policy Act of 1978 (PURPA) approach, which uses standard avoided cost rates. PacifiCorp updated this value to reflect values from the currently approved standard avoided cost rates, and the use of 2021 as a deficiency year. While the value was calculated with a 2021 deficiency year as required by Order No. 19-021, it is not clear whether the deficiency date from the standard nonrenewable QF avoided cost capacity value will be used to update this input in the future, as directed in the order from Phase I of this proceeding.³ PacifiCorp's currently approved Standard Avoided Cost Rate has a deficiency date of 2030 for nonrenewable QF avoided costs.

Transmission and Distribution Capacity Deferral

The Commission directed the use of PacifiCorp's latest Marginal Cost of Service Study for calculating this element of the RVOS. PacifiCorp updated this value based on its 2019 Marginal Cost of Service Study consistent with the Commission's directive.⁴ This value will continue to be refined so that it may be expressed in 12x24 blocks and incorporate a locational value by July 18, 2019.

Line Losses

The Commission adopted PacifiCorp's values and approach, which calculated marginal losses by load level and then fitted the results to a 12 month and 24 hour profile based on PacifiCorp's hourly load shape. No update to the line loss methodology is necessary at this time, however, interconnection voltage levels are a program-specific input, and to make the reported results more generic, the assumed avoided losses have been modified to be entirely at the secondary distribution level (*i.e.*, offsetting behind-the-meter load), rather than a mix of primary, secondary, and transmission levels. PacifiCorp has also expressed the line loss results in 12x24 blocks, which are readily available from the RVOS template.⁵

Integration

The Commission adopted PacifiCorp's solar integration value from the 2017 integrated resource plan (IRP), escalating at inflation. No update to this element is required at this time.

¹ See *PacifiCorp's Standard Avoided Cost Purchases from Eligible Qualifying Facilities Compliance Filing*, Docket UM 1729 (July 20, 2018).

² See Order No. 19-021 at 9.

³ Order No. 17-357 at 6.

⁴ Order No. 19-021 at 14-16.

⁵ Order No. 19-021 at 17.

Administration

The Commission adopted PacifiCorp's administration value reflecting one-time and ongoing program costs, subject to further development once PacifiCorp has individual program implementation costs available. No update to this element is required at this time.

Market Price Response

PacifiCorp has updated this value and worked with Staff on this calculation,⁶ but is still uncertain whether the "Effect on price of market energy during solar hours" has been implemented as intended. In addition, as designed by E3, the calculation used single values for the market price effect, solar energy, and market volumes, which each were then escalated at fixed rates. PacifiCorp's market volumes are from the study that determines the market blending ratios in the currently approved standard avoided costs. The market volumes vary widely over time and cross from sales to purchases, so a fixed escalation rate does not work well for this input. Instead, the template has been modified to use annual values for the three inputs. The underlying calculations remain unchanged.

Hedge Value

The Commission adopted a hedge value equal to five percent of the energy value, as it previously directed in the order from Phase 1 of this proceeding.⁷ No update to this element is required at this time.

Environmental Compliance

The Commission adopted PacifiCorp's environmental compliance value based on carbon prices from the 2017 IRP as a proxy, subject to further development as part of individual program implementation. No update to this element is required at this time.

Renewable Portfolio Standard (RPS) Compliance

PacifiCorp updated the RVOS template to include a proxy value based on its corrected July 2018 RPS compliance report, escalated at inflation. The proxy value of \$0.60/MWh (2018\$) reflects a utility load reduction and a diminished need to take action to comply with Oregon's RPS.⁸

Grid Services

The Commission adopted PacifiCorp's grid service value of zero until such time that there is additional evidence of grid services benefits. No update to this element is required at this time.

Utility-Scale Proxy

The Commission adopted a utility-scale proxy based on the most recently acknowledged IRP or IRP Update, and using the earliest year of capacity deficiency as the start year for capacity value. PacifiCorp has produced results for a utility-scale proxy based on its 2017 IRP costs and characteristics for an Oregon solar resource with an online date in 2021.

⁶ *Id.* at 20.

⁷ Order No. 17-357 at 12.

⁸ *Id.* at 23-24.

Additional Sensitivities

The attached spreadsheet contains three additional sensitivities. The first sensitivity adjusts the RVOS value for a 2030 generation capacity deficiency to be consistent with the currently approved non-renewable standard avoided cost rates. This also may be appropriate given the sizeable quantity of resources added to PacifiCorp's portfolio since the 2017 IRP was prepared. The second sensitivity reflects updated hourly loss of load probability values from the 2019 IRP. PacifiCorp's capacity contributions have been subject to an extensive public input process, where Staff and other stakeholders have had ample opportunities to consider the 2019 IRP details, including the details related to solar capacity contributions. The timing of loss of load events in the 2017 IRP results in capacity contributions that are quite high for solar resources, particularly in light of the significant quantity of solar resources added to PacifiCorp's portfolio since that IRP was filed. Finally, PacifiCorp has provided a sensitivity to the utility-scale proxy, reflecting the solar resource costs and characteristics being used in its 2019 IRP. Each of these sensitivities illustrates how more current information would impact the RVOS calculation and results. The results of the sensitivities are also shown below.

Scenario	Real Value (\$/MWh)	Nominal Value (\$/MWh)
Compliance Filing	\$50.86	\$62.44
Utility Scale Proxy (2017 IRP OR Solar Resource)	\$43.61	\$53.54
2030 Deficiency	\$42.80	\$52.55
2019 IRP Loss of Load Probability	\$31.61	\$38.81
Utility Scale Proxy (2019 IRP OR Solar Resource)	\$27.06	\$33.22

PacifiCorp looks forward to continuing to work with Staff to develop updated values for filing on July 18, 2019.

Inquiries regarding this filing may be directed to Cathie Allen at (503) 813-5934.

Sincerely,



Etta Lockey
Vice President, Regulation

Enclosures

CERTIFICATE OF SERVICE

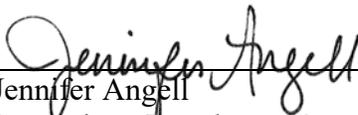
I certify that I served a true and correct copy of PacifiCorp's **Updated Values for Resource Value of Solar Calculation** on the parties listed below via electronic mail in compliance with OAR 860-001-0180.

Service List UM 1910

PATRICK ROWE OREGON DEPARTMENT OF ENERGY 1162 COURT ST NE SALEM OR 97301 patrick.g.rowe@doj.state.or.us	
OREGON CITIZENS' UTILITY BOARD	
OREGON CITIZENS' UTILITY BOARD 610 SW BROADWAY, STE 400 PORTLAND OR 97205 dockets@oregoncub.org	ROBERT JENKS (C) 610 SW BROADWAY, STE 400 PORTLAND OR 97205 dockets@oregoncub.org
MICHAEL GOETZ (C) 610 SW BROADWAY, STE 400 PORTLAND OR 97206 mike@oregoncub.org	
OREGON DEPARTMENT OF ENERGY	
ROBERT DELMAR (C) OREGON DEPARTMENT OF ENERGY 625 MARION STREET NE SALEM OR 97301-3737 robert.delmar@oregon.gov	WENDY SIMONS (C) OREGON DEPARTMENT OF ENERGY 550 CAPITOL ST NE 1ST FL SALEM OR 97301 wendy.simons@oregon.gov
OSEIA	
R THOMAS BEACH (C) CROSSBORDER ENERGY 2560 NINTH ST - STE 213A BERKELEY CA 94710-2557 tomb@crossborderenergy.com	CHARLIE COGGESHELL charlie.coggeshall@gmail.com
JON MILLER (C) OREGON SOLAR ENERGY INDUSTRIES PO BOX 14927 PORTLAND OR 97293 jon@oseia.org	

PACIFICORP	
PACIFICORP, DBA PACIFIC POWER 825 NE MULTNOMAH ST, STE 2000 PORTLAND OR 97232 oregondockets@pacificorp.com	AJAY KUMAR 825 NE MULTNOMAH STE 1800 PORTLAND OR 97232 ajay.kumar@pacificorp.com
RENEWABLE NORTHWEST	
RENEWABLE NORTHWEST 421 SW 6TH AVE., STE. 975 PORTLAND OR 97204 dockets@renewablenw.org	MICHAEL O'BRIEN (C) 421 SW 6TH AVENUE #975 PORTLAND OR 97204 michael@renewablenw.org
SILVIA TANNER (C) 421 SW 6TH AVE, STE 975 PORTLAND OR 97204 silvia@renewablenw.org	
STAFF	
BRITTANY ANDRUS (C) PO BOX 1088 SALEM OR 97308-1088 brittany.andrus@state.or.us	STEPHANIE S ANDRUS (C) BUSINESS ACTIVITIES SECTION 1162 COURT ST NE SALEM OR 97301-4096 stephanie.andrus@state.or.us

Dated March 18, 2019, 2018.



 Jennifer Angell
 Supervisor, Regulatory Operations