

ORDER NO. 16 362

ENTERED SEP 27 2016

**BEFORE THE PUBLIC UTILITY COMMISSION
OF OREGON**

UM 1432

In the Matter of

PUBLIC UTILITY COMMISSION OF
OREGON,

Establish the Alternative Compliance Payment
rate for 2018 and 2019 pursuant to
ORS 469A.180.

ORDER

DISPOSITION: STAFF'S RECOMMENDATION ADOPTED

This order memorializes our decision, made and effective at our September 27, 2016 Regular Public Meeting, to adopt Staff's recommendation in this matter. The Staff Report with the recommendation is attached as Appendix A.

Dated this 27 day of September, 2016, at Salem, Oregon.

Lisa D. Hardie
Chair



John Savage
Commissioner

COMMISSIONER BLOOM WAS
UNAVAILABLE FOR SIGNATURE

Stephen M. Bloom
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 Circuit Court for Marion County in compliance with ORS 183.484.

PUBLIC UTILITY COMMISSION OF OREGON
STAFF REPORT
PUBLIC MEETING DATE: September 27, 2016

REGULAR _____ CONSENT X EFFECTIVE DATE _____ Upon Commission Approval

DATE: September 27, 2016

TO: Public Utility Commission

FROM: John Crider ^{JC}
_{IF}

THROUGH: Jason Eisdorfer and Michael Dougherty ^m

SUBJECT: OREGON PUBLIC UTILITY COMMISSION STAFF: (Docket No. UM 1432). Establish the Alternative Compliance Payment Rate for 2018 and 2019 Pursuant to ORS 469A.180.

STAFF RECOMMENDATION:

Staff recommends the Commission adopt a renewable portfolio standard (RPS) alternative compliance payment (ACP) rate of \$90 per MWh for 2018 and 2019 for Portland General Electric, PacifiCorp, and all electricity service suppliers, pursuant to ORS 469A.180

DISCUSSION:

Issue

Whether to adopt the proposed ACP rate of \$90 per megawatt-hour (MWh) for 2018 and 2019 for Portland General Electric (PGE), PacifiCorp, and all electricity service suppliers (ESS).

Applicable Law

Under ORS 469A.180, an electric company or an ESS may elect to comply with the RPS by making an ACP. Under ORS 469A.180(1), the Commission shall establish the ACP rate in dollars per MWh.

Under ORS 469A.180(2):

"In establishing an alternative compliance rate, the commission shall set the rate to provide adequate incentive for the electric company or electricity service

Docket No. UM 1432
September 27, 2016
Page 2

supplier to purchase or generate qualifying electricity in lieu of using alternative compliance payments to meet the renewable portfolio standard applicable to the company or supplier.”

Further under ORS 469A.180(2), Commission considerations to set the ACP rate must include:

“the cost of qualifying electricity, contracts that the electric company or electricity service supplier has acquired for future delivery of qualifying electricity and the number of unbundled renewable energy certificates that the company or supplier anticipates using in the compliance year to meet the renewable portfolio standard applicable to the company or supplier.”

OAR 860-083-0500(1) requires that no later than October 1 of even-numbered calendar years the Commission will set an ACP for the next even-numbered compliance year and the following odd-numbered year. As a result, the ACP recommended in this Staff Report is for 2018 and 2019.

Discussion and Analysis

The ACP is intended to incent the electric company or ESS to purchase or generate qualifying electricity in lieu of using ACPs to meet the renewable portfolio standard. Staff recommends that the Commission set the rate at the lowest rate needed to incent the utilities and ESSs to purchase or generate qualifying electricity. Below are some considerations on determining the ACP rate:

- Regional REC wholesale prices: PGE’s 2015 RPS Compliance Report reports the average weighted cost of unbundled renewable energy certificates (REC) at about \$3.30 per MWh. (An unbundled REC represents the environmental attributes of the underlying power that is generated but is purchased separately from the power).
- National REC retail prices: As reported in the 2016 U.S. Energy Information Administration (EIA) Annual Energy Outlook, the latest reported prices for RECs range from \$1.50 to about \$25.00 per MWh. (Please see Table on Page 5)
- Western energy markets: The PacifiCorp 2015 Integrated Resource Plan (IRP) Update included market electricity price forecasts for the Mid-Columbia and Palo Verde trading hubs. For 2018 and 2019, the average price at these hubs is around \$30 per MWh.
- EIA Energy Outlook (2016): Includes estimates of the average levelized costs for generation facilities entering service in 2022. The costs are presented in 2016

Docket No. UM 1432

September 27, 2016

Page 3

dollars per MWh without continued tax credits. The costs for selected resource technologies are summarized in the table below.

Summary of Estimates of Average Levelized Costs for Generation Facilities Entering Service in 2022

| <i>Resource Technology</i> | <i>LCOE (\$/MWh)</i> |
|--|--------------------------|
| Natural Gas Combined Cycle Combustion Turbine | \$56.40 |
| Wind | 50.90 |
| Solar PV* | 58.20 |

**Solar PV costs are expressed in terms of net AC power available to the grid for the installed capacity.*

- PacifiCorp's 2015 IRP update includes estimates of the average levelized costs for generation facilities entering service in 2017. The costs are presented in 2014 dollars per MWh without continued tax credits. The costs for selected resource technologies are summarized in the table below.

| Resource Technology | 2014 \$/MWh |
|--|--------------------|
| Natural Gas Combined Cycle Combustion Turbine | 66-74 |
| Wind | 41-60 |
| Solar PV | 69-88 |

Docket No. UM 1432
 September 27, 2016
 Page 4

In summary, the following shows the ACP rates from 2012 to 2019

Summary of Alternative Compliance Payment (ACP) Rates*

| | Date Set** | Rate \$/MWh | Year Applied |
|-----------------|------------|-------------|--------------|
| | 1-Oct-10 | \$50 | 2012-2013 |
| | 1-Oct-12 | \$110 | 2014-15 |
| | 21-Jul-15 | \$110 | 2016-17*** |
| <i>Proposed</i> | 1-Oct-16 | \$90 | 2018-19 |

*Rates set pursuant to ORS 469A.180. OPUC Docket UM1432(1).

**OAR 860-083-0500(1) requires that no later than October 1 of even-numbered calendar years the Commission will set an ACP for the next even-numbered compliance year and the following odd-numbered year.

***The alternative compliance payment rate for 2016-17 was approved at the July 21, 2015 Commission meeting as consent item 6.

Conclusion

Based on the survey of estimated costs of new resources, it appears that an ACP rate just above the high solar price is likely the lowest rate needed to incent electric companies and ESSs to purchase or generate qualifying electricity. This is the primary criterion for setting the ACP rate in ORS 469A.180(2). Assessing the prices in the survey, after accounting for estimation error and adjusting to 2016\$, it appears that a rate above the solar price of \$89 would be a reasonable estimate of the needed ACP.

Staff therefore recommends that the alternative compliance payment rate be set at \$90 per MWh for 2018 and 2019 for Portland General Electric, PacifiCorp, and all electricity service suppliers, be adopted pursuant to ORS 469A.180.

PROPOSED COMMISSION MOTION:

Adopt the alternative compliance payment rate of \$90 per MWh for 2018 and 2019 for Portland General Electric, PacifiCorp, and all electricity service suppliers, pursuant to ORS 469A.180.

UM1432 2018, 2019 ACP rate.doc

Docket No. UM 1432
September 27, 2016
Page 5

<http://apps3.eere.energy.gov/greenpower/markets/certificates.shtml?page=1>
Table of national REC prices

| National Retail REC Products (Validated January 2015 with regular updates) | | | | | |
|---|--|---|---------------------------------|-----------------------------|------------------------------------|
| Certificate Marketer | Product Name | Renewable Resources | Location of Renewable Resources | Residential Price Premiums* | Certification |
| 3Degrees | National Renewable Energy Certificates | 100% wind, solar, geothermal, low-impact hydro, biogas, biomass | Nationwide | 0.5¢/kWh-1.5¢/kWh | Green-e Energy |
| 3 Phases Renewables | Green Certificates | 100% biomass, geothermal, hydro, solar, wind | Nationwide | 1.2¢/kWh | Green-e Energy |
| Arcadia Power | Wind Energy | 100% new wind | Nationwide | 0.5¢/kwh-1.5¢/kwh | Green-e Energy |
| Bonneville Environmental Foundation | Renewable Energy Certificates | wind, low-impact hydro, biogas, landfill gas, geothermal, solar | Nationwide | 0.8¢/kWh | Green-e Energy |
| Carbon Solutions Group | CSG CleanBuild | biomass, biogas, wind, solar, hydro | Nationwide | 0.15¢/kWh - 0.5¢/kWh | Green-e Energy |
| Community Energy | NewWind Energy | 100% new wind | Nationwide | 2.5¢/kWh | Green-e Energy |
| EDP Renewables | US Wind | 100% wind | Nationwide | 0.8¢/kWh | — |
| Green Core Electric | Wind Energy | 100% new wind | Nationwide | 1.0¢/kWh | Green-e Energy Certified RECs only |
| Mass Energy Consumers Alliance | New England Wind Friends | 100% new wind | New England | 5.0¢/kWh (contribution) | — |
| North American Power | American Wind | 100% wind | Nationwide | 1.5¢/kWh | Green-e Energy |
| NuPath Energy | NuSource1 | wind, solar | Nationwide | 1.2¢/kWh | Independent 3rd party |
| NuPath Energy | NuSourceNY | wind, small hydro | NY/nationwide | 1.6¢/kWh | Independent 3rd party |
| Renewable Choice Energy | American Wind | 100% new wind | Nationwide | 2.0¢/kWh | Green-e Energy |
| REpowerNow | REpower Credits | wind, solar, hydro | Wisconsin | 2.5¢/kWh | — |
| Santee Cooper | SC Green Power | landfill gas, solar | South Carolina | 3.0¢/kWh | Green-e Energy |
| Sky Energy, Inc. | WIND-E Renewable Energy | 100% wind | Nationwide | 2.4¢/kWh | — |
| SRECTrade | | | | | |
| Sterling Planet | Sterling Wind | 100% new wind | Nationwide | 1.5¢/kWh | Green-e Energy |
| WindCurrent | Chesapeake Windcurrent | 100% new wind | Mid-Atlantic States | 1.5¢/kWh | — |

Notes:
* Product prices are updated as of January 2015. Premium may also apply to small commercial customers. Large users may be able to negotiate price premiums.