

**PUBLIC UTILITY COMMISSION OF OREGON
STAFF REPORT
PUBLIC MEETING DATE: August 24, 2021**

REGULAR ____ **CONSENT** X **EFFECTIVE DATE** _____ **N/A**

DATE: August 16, 2021

TO: Public Utility Commission

FROM: Kacia Brockman

THROUGH: Bryan Conway, JP Batmale, and Sarah Hall **SIGNED**

SUBJECT: PACIFIC POWER:
(Docket No. LC 70)
Update on demand response efforts in Oregon.

STAFF RECOMMENDATION:

No recommendation – informational filing.

DISCUSSION:

Issue

PacifiCorp has filed an update on the Company's demand response efforts in Oregon in Docket No. LC 70 in compliance with Commission Order No. 20-186.

Applicable Rule or Law

OAR 860-027-0400(7) states that the Commission may provide direction to an energy utility regarding any additional analyses or actions that the energy utility should undertake in its next Integrated Resource Plan (IRP).

On June 8, 2020, the Commission issued Order No. 20-186 acknowledging PacifiCorp's 2019 IRP with conditions and additional directives. The Commission included in its additional directives the following requirements related to acquisition of demand response resources.

- PacifiCorp pursue demand response acquisition with a demand response [Request for Proposals (RFP)]. To the extent practicable, the demand response bids may considered with bids from the all-source RFP.
- PacifiCorp should work with non-bidding stakeholders from Oregon and other interested states to determine whether PacifiCorp should move forward with cost-effective demand response bids, or with a demand response pilot, or both.
- PacifiCorp and/or Staff are to provide an update on demand response efforts at a regular public meeting before the 2021 IRP is filed.¹

Analysis

Summary

On August 16, 2021, PacifiCorp filed a written update on the Company's demand response efforts in Oregon in compliance with the directive provided by the Commission in Order No. 20-186. Staff provides this memo to introduce the Company's report at the August 24, 2021, regular public meeting.

Background

In the 2019 IRP, PacifiCorp identified the need for 178 MW of demand response system-wide by 2029, but identified no demand response opportunities in Oregon in the Action Plan timeframe. Staff and stakeholders expressed concern that PacifiCorp had not demonstrated that the Company had fully explored all cost-effective demand response resources. As a result, the Commission's acknowledgement order required that PacifiCorp conduct an RFP for cost-effective demand response and provide an update to the Commission prior to filing the 2021 IRP. PacifiCorp expects to file the 2021 IRP on September 1, 2021.

PacifiCorp's update on demand response efforts

As described in PacifiCorp's written update, the Company conducted a demand response RFP in 2021 and received a robust response from bidders. The top-ranked demand response bids were evaluated in the IRP modeling along with top bids from the 2020 all-source RFP. As a result of the IRP modeling, a variety of demand response resources in Oregon were selected to move forward to procurement. The Company expects to negotiate terms with winning bidders and propose new program tariffs as early as Q4 2021, with programs launching as early as summer 2022.

PacifiCorp's update also provides recent results from the Irrigation Load Control Pilot – the Company's only current demand response pilot in Oregon.

Conclusion

¹ See Docket No. LC 70, Order No. 20-186, issued June 8, 2020, p. 23.

Staff commends PacifiCorp for 1) its stakeholder engagement preceding the Company's release of the demand response RFP; 2) the minimum RFP requirements that allowed bids for a variety of demand response technologies; and 3) the RFP selection criteria that included scoring and valuation for non-price elements to encourage staffing diversity and equitable delivery of programs by bidders.

Staff is encouraged by the results of the RFP and the IRP modeling and looks forward to seeing the new demand response programs come to fruition.

PROPOSED COMMISSION MOTION:

No proposed motion – informational filing.



825 NE Multnomah, Suite 2000
Portland, Oregon 97232

August 16, 2021

VIA ELECTRONIC FILING

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

Attn: Filing Center

Re: LC 70 – PacifiCorp Update on Demand Response Resource Acquisition

PacifiCorp d/b/a Pacific Power (PacifiCorp or the Company) submits for filing in compliance with Public Utility Commission of Oregon (Commission) Order No. 20-186 and action item 4 which asked for an update on demand response efforts prior to filing of the 2021 IRP.

Background

PacifiCorp's 2019 IRP¹ identified the addition of 178 MW of DR system wide by 2029 as resource additions of a least cost least risk long term resource plan. A condition of acknowledgement of the 2019 IRP Demand Side Management (DSM) actions by the Oregon Commission directed PacifiCorp in Order No. 20-186 to do the following:

1. Pursue demand response acquisition with a demand response RFP. To the extent practicable, the demand response bids may be considered with bids from the all-source RFP.
2. Work with non-bidding stakeholders from Oregon and other interested states to determine whether PacifiCorp should move forward with cost-effective demand response bids, or with a demand response pilot, or both.

To acquire the resource needs identified in the 2019 IRP, the company issued the All Source (AS) 2020 Request for Proposals (RFP)² on July 7, 2020 for large scale resources and subsequently issued a demand response (DR) RFP for cost effective DR resources. Successful initial short list bids from this DR RFP joined final bids from the AS 2020 RFP for a combined analysis in the 2021 IRP to determine the optimal acquisition of resources to meet system needs. During discussions with non-bidding stakeholders in the fall of 2020, PacifiCorp agreed to consider RFP responses which initially may not be cost-effective, to move forward as pilots in Oregon. If RFP responses were found to be cost-effective then PacifiCorp would initiate processes to procure those resources in Oregon and Washington.

¹ <https://www.pacificorp.com/energy/integrated-resource-plan.html>.

² <https://www.pacificorp.com/suppliers/rfps/all-source-rfp.html>.

2021 Demand Response RFP

On February 8, 2021, PacifiCorp issued an RFP soliciting proposals from implementation contractors for Demand Response (DR) resources. Although a variety of programs were eligible for consideration, of most interest to PacifiCorp were programs located in Oregon and/or Washington with the following focus:

1. Non-Residential Curtailment
2. Residential and/or Small Commercial Smart Thermostat or Water Heaters
3. Irrigation load control

Additionally, bidders were asked to meet the following minimum requirements:

1. Programs must achieve 2 MW of quantifiable demand reductions within three years of operation.
2. Programs must demonstrate a strong focus on customer service, participation and satisfaction to both end use customers and internal PacifiCorp staff.
3. Program bidders must demonstrate experience delivering similar DR programs while meeting goals with high levels of customer satisfaction and customer service.
4. Programs must be designed to cover all program functions as a turnkey offer.
5. PacifiCorp must be enabled to initiate events through the (Energy Management System) EMS using integrated vendor provided (Demand Response Management System) DRMS software and hardware which meets all cybersecurity and system integration requirements.
6. Bidders must provide information on performance characteristics for valuation (as listed in Table 1).

Table 1 – DR Program Performance Characteristics for Valuation

Program Performance Characteristic	Minimum Characteristic for RFP	Greater Value
Notice	Day Ahead	60 min, 22.5 min, 7.5 min, <2 sec
Cancellation notice	Day Ahead	Hour Ahead to no restriction
Ramp to Available Demand Reduction	1 hour	60 min, 22.5 min, 7.5 min, < 2 sec
Duration of Curtailment	1 hour / event	Shorter or longer duration as specified by PacifiCorp
Total Number of Events	10 events per season/year	More events per season/year
Event Frequency	1 per week	More events per day/week
Total Load Shed Capability	2 MW	25 MW or larger
Targeted Curtailment Capability	All participants / full load shed only (on/off)	Ability to follow changing targeted curtailment amount
Time for Program Growth to Total Load Shed Capability	3 years	Faster growth

In response to the RFP, PacifiCorp received bids from 18 firms covering five major technology categories. Proposals by technology and state are summarized below in Table 2.

Table 2 – DR Program Performance Characteristics for Valuation

Number of Bidders by Technology Category	OR	WA
Smart Thermostat	9	8
Non-residential Curtailment	8	11
Residential Battery	4	5
Irrigation Load control	3	3
Grid Interactive Water Heaters	1	1
Total ³	25	23

PacifiCorp first evaluated proposals for conformance to the RFP minimum requirements and for completeness of responses. Remaining bids were then grouped by state, customer type, and end use type and scored with price and non-price components. Price scores were developed with bidder pricing and electric system benefits to determine a net cost of capacity for each bid. Non-price components were based on bidder's ability to demonstrate diversity in staffing and equitable delivery of programs. Price scores were up to 80 percent of weight using net cost of capacity (\$/kW-yr) and non-price scores were up to 20 percent of weight. The non-price score (either 0, 10 or 20 points) was added to the price score (between 0-80) for each bid resulting in a final weighted score between 0 and 100 points. The three highest scoring bids from each group of customer type and end use were then used for modeling (along with the 2020 AS bids) in the IRP. For technologies that did not receive three bids, the remaining qualifying competitive bids moved forward for IRP modeling with the 2020 AS bids.

IRP modeling

The IRP modeled resources using the average stated cost of capacity from bidders and the total expected MW volume⁴ in each year to develop a net cost of capacity for each resource (\$/kW-yr). For Pacific Power States, bids that received points for Non-Price scores, were assigned up to 10 percent secondary value credit in the IRP modeling. DR bids were modeled in both the 2019 IRP system optimizer and the 2021 IRP Plexos modeling platform when that modeling tool became available. The following resources were selected for Oregon based on IRP modeling:

1. Non-Residential Curtailment
2. Residential Smart Thermostat
3. Grid Interactive Water Heaters
4. Irrigation load control
5. Residential Batteries⁵

³ Total proposed programs are greater than total bidders as some bidders proposed multiple programs covering multiple states.

⁴ Stated capacity volumes from bidders were adjusted to reflect parameters specific to system and end-use load characteristics.

⁵ While not requested as a specific resource, the Company received battery proposals that were not cost-effective. However, CPA modeled battery resources did appear cost-effective. The Company plans to further evaluate residential battery resources for consideration.

Procurement

DR resources will then move forward in the initiation of procurement processes for those resources. Top bidders modeled in the IRP as cost-effective will be asked to confirm their pricing, non-price attributes, and volumes for demand response. Vendors selected as providing the best price will then enter negotiations with the Company on details regarding program structure, final pricing, and requirements. If additional performance characteristics or customer service functions are needed, the negotiation team will engage with the vendor selected to explore current capability to meet current needs. The Company will not dismiss other vendors until a contract has been agreed to by both parties.

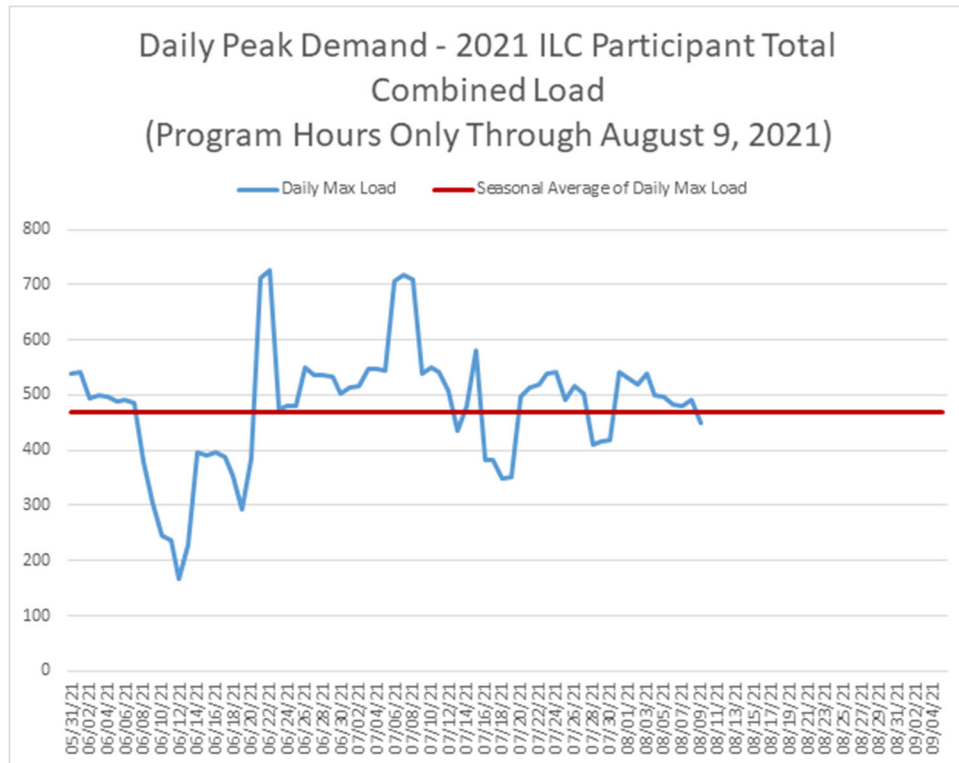
Program and tariff schedule filing

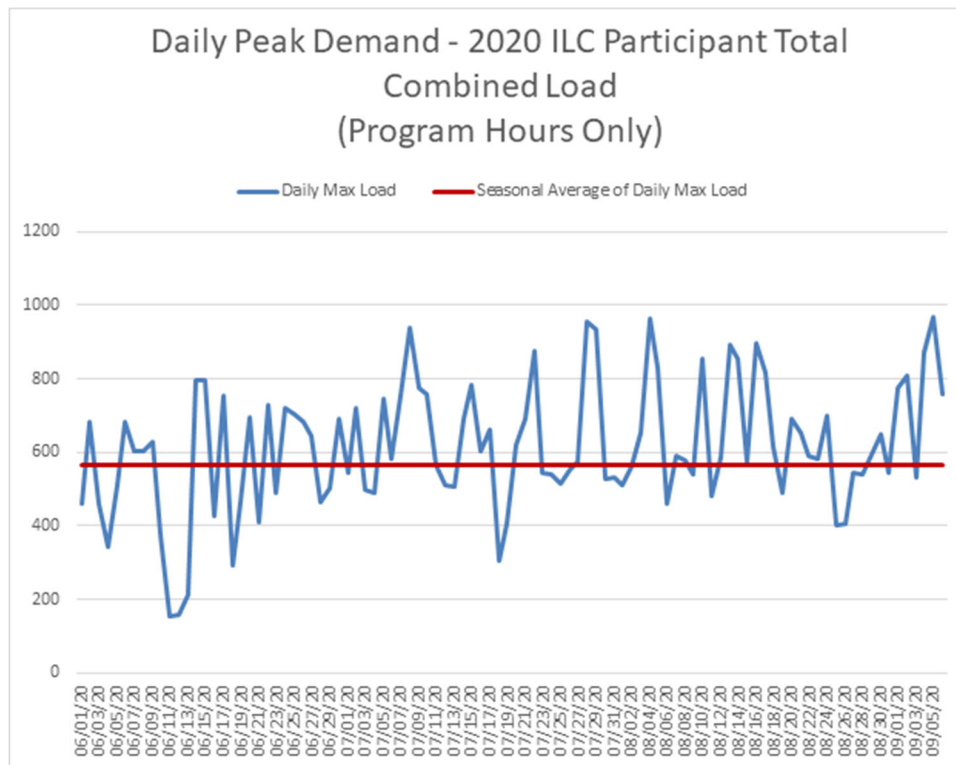
Following final vendor selection, PacifiCorp plans to host a workshop for non-bidding stakeholders to collect feedback on program outreach and delivery prior to filings. The Company expects to file draft tariff schedules and program filings for demand response programs for Commission consideration in Q4 of 2021, unless directed otherwise. Program filings will provide detailed information on the costs and capacity volumes expected from programs along with information on implementation and marketing for consideration. Given recent record summer heatwaves in the Pacific Northwest, PacifiCorp hopes to be able to deploy demand response at scale by the summer of 2022.

Update on the Oregon Irrigation Pilot

PacifiCorp offers an irrigation load control pilot program to selected customers through Oregon Schedule 105. The following information is a mid-2021 season update on available loads, a comparison with available loads from 2020, event performance and marketing activities. This information is preliminary. Final information will be provided in the 2021 annual report.

Through August 9th, 2021, the average available load from all participants is 469 kW, nearly 20 percent lower than the 574 kW for the 2020 season. This is due primarily to reduced pumping as a result of reduced water availability from the upper Klamath Lake.



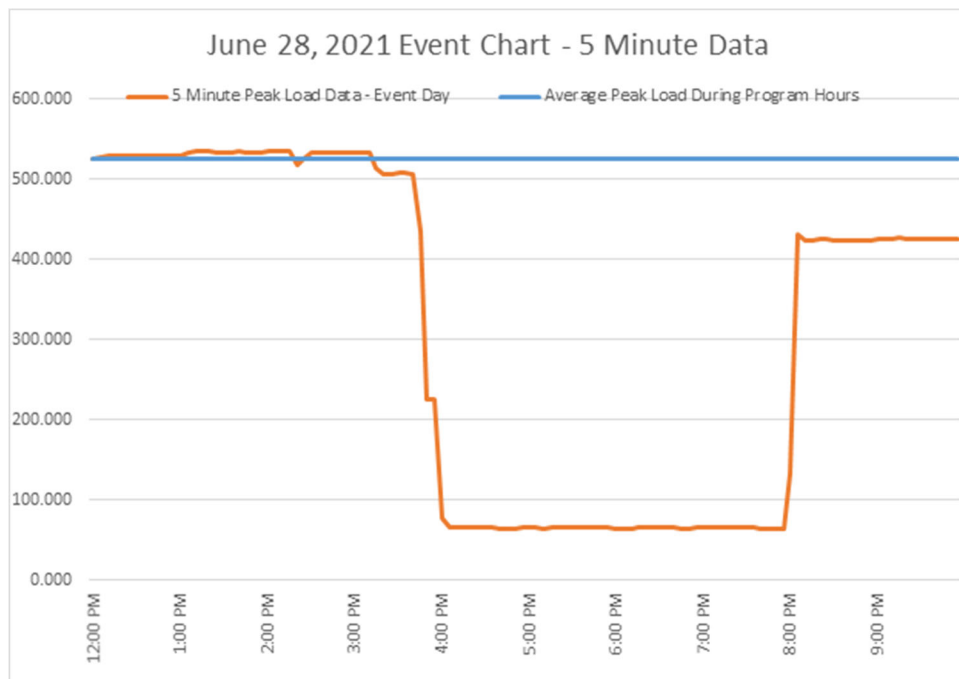
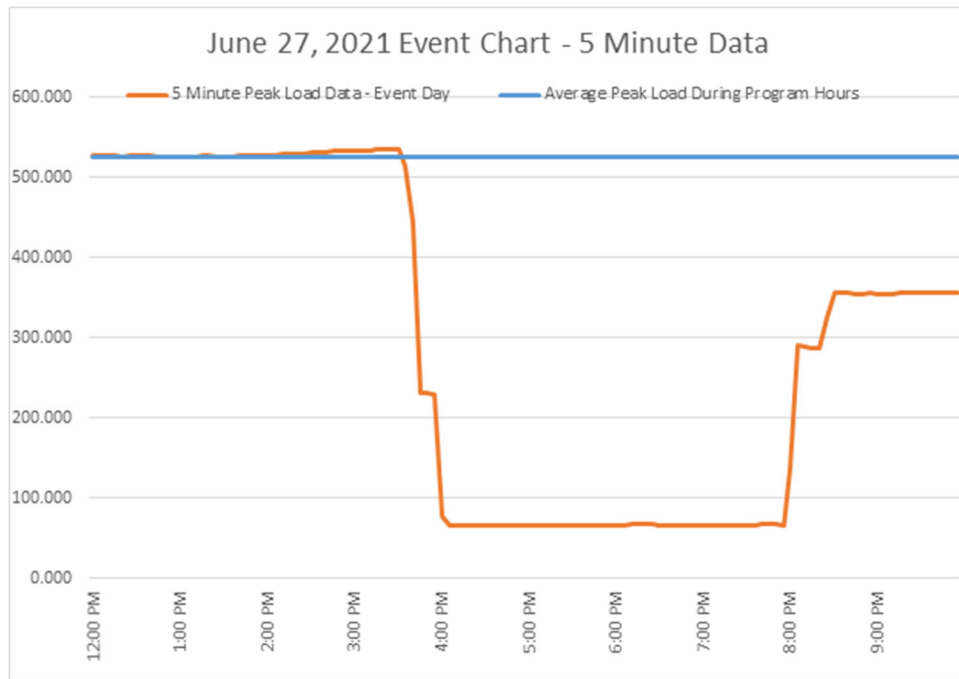


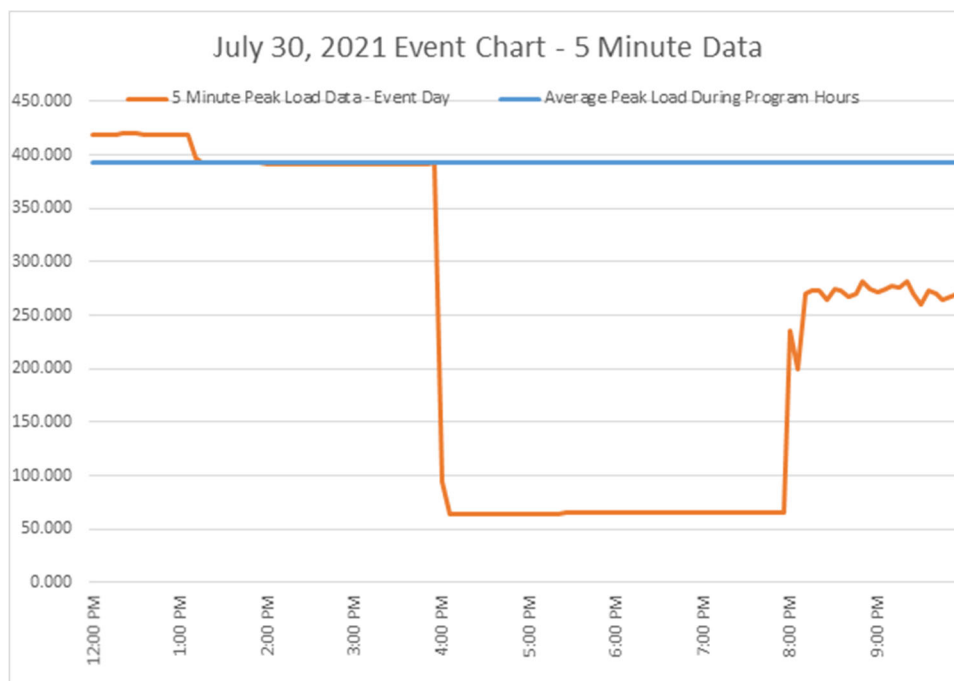
As of August 9, 2021, PacifiCorp has initiated three load control events:

- June 27, 2021 between hours of 4:00PM - 8:00PM - Sunday⁶
- June 28, 2021 between hours of 4:00PM - 8:00PM - Monday
- July 30, 2021 between hours of 4:00PM - 8:00PM - Friday

Three additional events between August 12th and 14th have been scheduled.

⁶ Expanded days, including weekends were proposed in Advice 19-008 and approved on February 14, 2020.





In 2021, customer marketing activities continued with the goal of expanding program participation, primarily in Southern Oregon. Working with the Energy Trust of Oregon (ETO), Connected Energy identified irrigation customers who have participated in ETO incentive programs for irrigation upgrades and enhancements. Through contact data provided by ETO, Connected Energy initiated calls to more than fifteen potential program participants. Interest in the program has been favorable, but the current timing of crop harvesting along with current water restrictions has resulted in several requests to contact them again in 4-6 weeks. Several other irrigators have voiced strong interest in the program for next year, provided they have access to water and therefore the ability to operate their irrigation pumps.

Sincerely,

Shelley McCoy
Director, Regulation