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May 19, 2023

PACIFIC POWER
A DIVISION OF PACIFICORP

825 NE Multnomah Street, Suite 2000
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May 19, 2023

VIA ELECTRONIC FILING

Amanda Maxwell
Executive Director and Secretary
Washington Utilities and Transportation Commission
621 Woodland Square Loop SE
Lacey, WA 98503

RE: DO NOT REDOCKET—Docket UE-220848 - Residential Demand Response Program under Schedule 106

PacifiCorp d/b/a Pacific Power & Light Company (PacifiCorp or Company) proposes the enclosed residential demand response program under the recently approved Tariff Schedule 106—Demand Response Programs. The Company requests a June 30, 2023 effective date.

Accompanying this filing is Confidential Exhibit A, which includes confidential information and is provided to the Commission in accordance with WAC 480-07-160. Confidential Exhibit A include valuable commercial information, including confidential information and analysis related to the residential demand response program. Disclosure of such information would harm Pacific Power by providing an unfair competitive disadvantage.

Purpose

On August 26, 2022, PacifiCorp's Schedule 106—Demand Response Programs went into effect, enabling a broad scope of demand response programs in Washington. As discussed in the process outlined in the Company's Clean Energy Implementation Plan[1] (CEIP) and advice letter submitted in Docket UE-220550, the Company proposes the following:

- Introduce a residential demand response program under the provisions of Schedule 106.
- Position residential demand response program costs for recovery through a deferral account.

On January 26, 2023, the Washington Utilities and Transportation Commission (Commission) issued Order 01 in Docket UE-220848 approving PacifiCorp's request to establish and maintain a balancing account to defer costs associated with its irrigation demand response program and commercial and industrial demand response programs. Consistent with the above referenced Order, PacifiCorp has filed to amend the deferral amounts in the balancing account to include the costs associated with the new demand response program for residential customers, $689,720 over 5 years. PacifiCorp will seek recovery of these deferred costs through Schedule 191 in a future Commission proceeding. PacifiCorp will include details about the residential demand response program in its biennial CEIP updates. As outlined at the end of this filing, PacifiCorp has shared

[1] PacifiCorp 2021 Clean Energy Implementation Plan, Chapter 3.

program details with the appropriate advisory groups and sought feedback before implementing the new residential program.

I. Demand Response is a Resource in the Clean Energy Implementation Plan

The filing is part of the continuing implementation of resources identified in the 2019 IRP and further outlined in the actions specified in the Clean Energy Implementation Plan as part of the Company's compliance with the Washington Clean Energy Transportation Act (CETA).

The Company's demand response request for proposals (RFP) issued on February 8, 2021, was a key component of identifying resource types and costs that were modeled and used to establish the demand response target. The Company emphasized in its RFP that bidders include programs in Oregon or Washington service areas and products that achieve at a minimum 3 megawatts (MW) in three years, scalable to 25 MW over five to 10 years. The Company received bids from 18 firms covering multiple programs for multiple sectors. RFP bids were scored based on cost, volume, and equity criteria and the top bid for each program category was selected for inclusion into the 2021 Integrated Resource Plan (IRP) model.

Each program category represents a discrete set of customer end uses, *e.g.*, commercial or industrial or residential water heating. Modeling in the IRP reflects the top bid because all bids within a program category rely on the same pool of customers. Costs were characterized via RFP bids and the Conservation Potential Assessment (CPA) and compared against supply side resources. The modeling identified a need for demand response not just in the short term, but throughout the planning horizon (2021–2040) of the Company's 2021 IRP preferred portfolio. Demand response needs for Washington were further clarified in the Company's Clean Energy Implementation Plan (CEIP)[2] where 37.4 MW of demand response were targeted through 2025.

The proposed program development strategy for demand response is outlined in Chapter 3 of the Clean Energy Implementation Plan[3] and this filing is designed to support and align with that strategy. The strategy reflects that the Company did not offer any demand response programs in Washington. Specifically, prior to filing demand response programs, PacifiCorp will share proposed program characteristics, budgets, implementation and evaluation strategies, and cost-effectiveness methodologies to facilitate feedback and guidance of stakeholders, in particular relying on the DSM Advisory Group (and consultation with the Equity Advisory Group). These meetings, in conjunction with email communications in which supporting information is shared, will be pivotal in helping the company develop programs and refine assumptions. Feedback will then be incorporated into a draft filing which will be shared with the DSM Advisory group to gather additional feedback. Programs, such as the residential program, will be filed independently to allow for flexibility and increase efficiency in the launch of programs. This program will be in addition to the irrigation demand response program approved in Docket UE-220550 and the commercial and industrial program approved in Docket UE-220848.

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[2] Available online https://www.pacificorp.com/content/dam/pcorp/documents/en/pacificorp/energy/ceip/PAC-CEIP-12-30-21_with_Appx.pdf. See pp 22-23 for demand response target and calculations.
[3] Ibid, p. 83.

The program is designed to help deliver the demand response resources identified in the CEIP target. Since this filing utilizes avoided costs generated by the 2023 IRP and displays residential selections from the 2023 IRP, the Company performed a comparative analysis of demand response selections for the same period as the CEIP, 2022-2025 to gain an understanding if results were in alignment. When 2023 IRP selections were analyzed using the same methodology as the CEIP; *i.e.*, picking highest of the summer OR winter value for a year, the 2025 selection is 34.7 MW which can be directly compared with the 37.4 MW listed above. The difference is small, approximately eight percent lower. This filing does not propose or preclude a demand response target adjustment. Any adjustments would be proposed in the CEIP proceeding.

II. Using the provisions of Schedule 106 to add a Demand Response Program

As outlined in Docket UE-220550, Schedule 106 is intended to enable multiple demand response programs. Each new demand response program will be filed with the Commission and will include the information found on the website, a deferral request, cost effectiveness, the proposed evaluation and reporting schedule, and other details that may be required to support an approval request.

As outlined in Docket UE-220550, the Company expects to review each program delivered under Schedule 106 annually for performance and the need for any changes. The Company will generally consider changes to its programs annually, though a program that is performing well may not require annual changes. Conversely, the Company may propose changes more frequently than annually if there is compelling market data. To initiate a change using this process, the Company will follow the process outlined in Docket UE-220550,[4] presenting information to the DSM Advisory Group (and consult with the Equity Advisory Group), and seek comments prior to making changes. The Company will respond to stakeholder's comments, including reasoning, and any proposed resolution to issues raised and provide back to the stakeholders. The Company will clearly post the notice of change(s) to the program website with at least 45 days advance notice. The change process anticipated for programs administered under this Schedule is similar to the process utilized by the Company for energy efficiency program design and many of its incentive or requirement changes.

Based on stakeholder conversation during review and approval of the irrigation filing referenced above, the Company will not use the proposed change process to make changes to Schedule 106, remove or add pilots/programs to Schedule 106, as those substantive changes will require filing for approval.

The approval requested herein follows the directive provided in Order 01 in Docket UE-220848.

[4] Exhibit D.

III. Residential Program

PacifiCorp proposes to establish a demand response program for its Washington residential customers under Schedule 106, as described in the following sections A through F. The first five years of the Washington residential selections from the 2023 IRP are provided in Table 1.

Table 1 – Residential selections in the 2023 IRP

	2023	2024	2025	2026	2027
Incremental MW (gen)	3.5	0.20	1.20	1.11	7.80
Cumulative MW (gen)	3.5	3.70	4.90	6.01	13.81

A. Residential Program Period, Size and Grid Services Provided

The Company is proposing an ongoing residential demand response program without an end date to align with ongoing capacity needs in the 2023 IRP period (2023-2042) and meet the demand response targets in the CEIP. Control of water heaters will occur with no advance notice and provide capacity and reserve grid services, with the potential for frequency response grid services as well to the Company. Control of thermostats will occur with no less than 20-minute notice and will also provide capacity and curtailment grid services to the Company. These grid services are included in the impacts included in Table 2. Estimated impacts by equipment type as a percentage of the totals in Table 2 are provided in Table 3.

Table 2 – Residential program impacts and participation estimates[5]

	2023	2024	2025	2026	2027
MW incremental (gen)[6]	0.15	0.19	0.39	0.19	0.25
MW cumulative (gen)	0.15	0.34	0.73	0.92	1.17
Participants (incremental)	194	289	576	288	295
Participants (cumulative)	194	483	1,059	1,347	1,642

*Participation in 2023 will vary depending on when the program is approved. Customers can enroll the approved program anytime during the year. At this point in the year, any 2023 participants and enrolled MW should be considered as available for 2024 (and additive to the 2024 impacts in Table 2).

[5] Represent expected impacts and costs but ramping may occur more quickly than presented. If additional eligible MWs and participants are enrolled, the resultant totals may exceed totals presented. The program will not cap participation at estimate participation levels.

[6] MW volumes represent expected or average capacity available during a given year. The value is less than the maximum connected load of enrolled equipment and is a planning estimate to account for duty cycles, *e.g.*, all equipment would not be operating continuously during an event period, absent an event. This value corresponds to the max controllable load value in the cost effectiveness exhibit when the impacts of line losses are included.

Table 3 – Estimated Impacts (percentage of total) by equipment type

Equipment type	Percentage of total MW in Table 2	Percentage of total participants in Table 2
Water heaters	60	43
Thermostats	40	57

B. Delivery of the Program

PacifiCorp has selected Open Access Technologies International, Inc. (OATI) to deliver the program. They were the successful bidder in the 2021 Demand Response RFP (described above) to deliver these services for PacifiCorp's customers in Oregon and Washington. OATI is responsible for the aggregation of smart thermostats using the capabilities of the equipment manufacturer software; directing customers to existing online technical resources to assist with installation of new thermostats; installation, operation, and maintenance of the load control devices on water heaters; dispatch of the devices as directed by the Company; customer participation; customer service; and issuance of customer incentives. Marketing messages will be reviewed and approved by the Company to ensure they are culturally responsive and strive to reach all customers. The Company, OATI, and the energy efficiency implementation teams will collaborate on an on-going basis, so residential customers have cohesive messaging around energy efficiency and demand response opportunities and integrated or bundled customer incentive offers where it is feasible.

The residential demand response program is part of an overall equity approach by the Company to make demand response programs available to all customer classes. Some of these customers may be located in the Highly Impacted Communities and participation will be tracked.[7] Direct participant benefits from the program include incentive payments. Other participant benefits may include better public image and/or satisfaction/pride from preventing outages and being green.[8] The availability of flexible load benefits all customers including non-participants by reducing costs of utility operations. The program will focus on water heaters in multi-family buildings and smart thermostats controlling compressor-based cooling and/or heating equipment in multi-family and single-family homes. Control devices will be installed on existing tank type water heaters in good condition without integral communications capability (such as EcoPort).[9] Tank or heat pump water heaters with an EcoPort will have a compatible communications/control device installed. Tanks will not be replaced as part of this program. Tenants, homeowners, and multi-family property owners with master metered service are eligible to participate.

Income qualified customers are eligible to participate in these offers. To help overcome barriers like WiFi availability, information on resources such as the Federal Communications Commission's (FCC) Affordable Connectivity Program will be provided as part of marketing materials. Focused outreach to community action agencies serving Pacific Power customers will

[7] CEIP, Table 6.1 CBIs and Metrics, Participation in company energy and efficiency programs and billing assistance programs.
[8] CEIP, Table 3.10, Examples Non-Energy Benefits and Costs of Demand Response Programs.
[9] EcoPort is the brand name of CTA-2045 certified products.

be conducted so agency clients can learn about demand response program offerings when they receive other services.

OATI is a strong supporter of diverse businesses and has experience utilizing diverse subcontractors, including those installing hardware at customer sites. The OATI team delivering or supporting this program includes a diverse work force.

The residential program will operate as a complement to the residential time of use pilot Schedule 19).[10] To ensure both these offers are positioned to deliver useful information about customer willingness to change consumption patterns in response to incentives or pricing plans while not discouraging participation in either offer, co-participation will be limited during the first three years, *i.e.*, through the end of 2025.[11] A total of 200 pieces of equipment in residences participating in the time of use pilot may be enrolled in the demand response program. In the 2025 annual report, a recommendation will be provided about how to treat co-participation going forward.

C. Residential Program Costs

Estimated costs for the residential demand response program are provided in the Table 4 and include vendor costs, customer incentives, customer outreach/advertising, evaluation, measurement and verification (EM&V) and utility staffing costs directly attributable to managing the program.

Table 4 – Residential Program Costs

	2023*	2024	2025	2026	2027
Total Program Costs[12]	$ 76,200	$113,164	$ 169,584	$ 151,595	$179,177

* Participation in 2023 will vary depending on when the program is approved. Customers can enroll in the approved program anytime during the year. At this point in the year, any 2023 costs should be considered as incurred in either 2023 or 2024 (and additive to the 2023 costs in Table 4).

D. Cost Effectiveness

The Company is using the 2016 California Demand Response Protocol for estimating cost-effectiveness of programs. A Total Resource Cost perspective will be provided prospectively when seeking Commission approval for a new demand response program and retrospectively as part of the annual reporting. The cost effectiveness prospective provided will be similar to information on energy efficiency programs in Washington. Cost effectiveness analysis for this

[10] Schedule 19 was approved as a pilot program in Docket UE-191024.
[11] Requirement will be included in Exhibit B.
[12] Additional detailed cost breakouts can be found in Confidential Exhibit A.

program is similar to the irrigation demand response program approved in Docket UE- 220550 and the commercial and industrial demand response program approved in Docket UE-220848.

Cost effectiveness for each of the two equipment types in the residential demand response program in addition to a combined view is provided in Confidential Exhibit A. The water heater offer is cost-effective from the utility cost and total resource cost perspectives when ten years of benefits and costs are compared. Cost effectiveness of the thermostat offer is sub-optimal from both perspectives. When the benefits and costs from both offers are combined, the overall residential demand response portfolio is cost effective. In addition to reserve and capacity benefits, control of water heaters, available in real time with no notice have the potential to provide frequency response services for the Company.[13] Frequency events are unpredictable and difficult to model on a prospective basis. It is also unclear to what extent water heaters will be used for frequency response purposes. Therefore, frequency response was not modeled as an additional benefit for water heaters at this time, though its potential as a benefit may be realized in future years. A summary of cost-effectiveness results over a ten-year horizon are summarized below in Table 5.

Table 5 – Residential Program Cost-Effectiveness Results

Product Category	**UCT**	**TRC**
Water heaters	1.4	1.5
Thermostats	0.5	0.6
Combined (sum of benefits/sum of costs)	**1.0**	**1.1**

E. Cost Recovery

PacifiCorp has filed to amend the deferral amount approved in Docket UE-220848 to add the residential program costs of $689,720 over five years. Subject to Commission approval, deferred costs for approved or accepted demand response programs, including this one for residential customers would be recovered through Schedule 191. A change to Schedule 191 is not part of this filing.

F. Annual Reporting

PacifiCorp will provide an annual report for the residential program following the first year of program operation and annually thereafter. Annual reporting will at a minimum provide summary of program activities, costs, and accomplishments, future changes under consideration, feedback received, and other items that are requested by the Company's Washington DSM

[13] Additional information regarding frequency response service and needs can be found in Appendix F – Flexible Reserve Study of the Company's 2023 IRP. Available online at https://www.pacificorp.com/content/dam/pcorp/documents/en/pacificorp/energy/integrated-resource-plan/2023-irp/2023_IRP_Volume_II_A-P.pdf

Advisory Group. Annual reporting for demand response programs for the prior year will be included as an attachment to the clean energy progress and compliance reports due July 1 of each year. Drafts of the demand response report will be provided to the DSM Advisory Group at least 30 days ahead of the July filing.

Stakeholder Involvement – Planning, Procurement, and Program Design

Stakeholder engagement was an integral part of pursuing demand response acquisitions with a demand response RFP. Key activities tied to the demand response are provided in summary form and are in addition to residential load management activities described later.
On January 21, 2020, PacifiCorp held a CPA workshop meeting in the 2021 IRP public input process. Highlights included review prior IRP/CPA comments, proposed CPA methodologies for demand response, interactions between demand response and pricing/rates options.

On February 18, 2020, PacifiCorp held a technical workshop in the 2021 IRP public input process. Highlights included further defining the grid services a demand response resource can provide and IRP credits for demand response.

On April 14, 2020, PacifiCorp held a stakeholder meeting interested in demand response. Highlights included background information on existing demand response programs, review of demand response in 2019 IRP, review of demand response potential in the conservation potential assessment, discuss pilot concepts and gather input on how to structure or focus a demand response RFP.

On April 16, 2020, at its regular IRP public input meeting, PacifiCorp shared information on the demand response stakeholder meeting with the broader IRP audience.

On June 18 & 19, 2020, PacifiCorp held an IRP public input meeting, which included 2019 IRP Action Item 4 acknowledgement with demand response conditions and draft RFP schedule shared with broader IRP audience.

On August 28, 2020, PacifiCorp held an IRP CPA Technical Workshop. Highlights included an assessment of demand response resources, assessment methodology, transition to grid services view of demand response, development of demand response costs, draft potential results (short and long duration, winter and summer) and a demand response RFP update.

On October 22, 2020, PacifiCorp held an IRP public input meeting. Highlights included demand response ramp rates, battery storage assumptions, types of demand response costs used in the levelized calculation, demand response cost bundles.

On October 14, 2020, Johnson Consulting Group was hired to: Research demand response technical vendor requirements, summarize demand response RFPs that have been issued by other energy organizations, assist in developing a simple Request for Qualifications (RFQ) template to identify potential vendors, assist in the distribution of the RFQ to ensure it is widely circulated to encourage a robust response rate, Conduct in-depth interviews with up to 15 potential demand

response vendors to identify market barriers, opportunities, and critical elements that should be addressed in a forthcoming demand response RFP, summarize key elements and essential components that should be considered in developing a demand response RFP and a demand response RFQ.

On October 22, 2020, PacifiCorp held an IRP Public input meeting. Highlights included demand response ramp rates, battery storage assumptions, types of demand response costs used in the levelized calculation, demand response cost bundles.

On November 2, 2020, PacifiCorp posted the RFQ for bidders to the following website: https://www.pacificorp.com/suppliers/rfps/demand-response-rfp-2021.html. RFQ responses were due on or before November 23, 2020, and were intended to build the bidders list for the RFP and help to expand our outreach to a range of suppliers. The RFQ also asked respondents to provide some brief descriptions of potential programs and also asked for Oregon pilot ideas, response to stakeholder interests. The RFQ was also posted to Peak Load Management Alliance, Association of Energy Service Professionals, International Energy Program Evaluation Conference, Energy Central, and ESource in order to reach a broad audience.

On February 8, 2021, PacifiCorp released the RFP to 26 bidders registered in the Company's on-line procurement system.

On February 9, 2021, PacifiCorp filed the RFP with the Washington Utilities and Transportation Commission under Docket UE-210088.

On March 15, 2021, the Company received RFP responses from 18 different organizations.

On April 23, 2021, PacifiCorp held an IRP public input meeting. Highlights included updates on All Source 2020 and the demand response RFPs.

On June 25, 2021, PacifiCorp held an IRP public input meeting. Highlights included update on demand response selected by the System Optimizer model selections from the 2021 demand response RFP.

On August 27, 2021, PacifiCorp held an IRP public input meeting highlighting the 2021 preferred portfolio action plan with demand side management actions.

On October 19, 2021, PacifiCorp held a technical workshop on proposed CEIP utility actions to meet CETA requirements, specifically highlighting demand response actions, including commercial and industrial load control, that the Company intended to undertake as part of the CEIP.

On October 20, 2021, PacifiCorp met the Equity Advisory Group (EAG) on proposed CEIP utility actions, specifically highlighting demand response actions, including commercial and industrial load control, that the Company intended to undertake as part of the CEIP.

On November 10, 2021, PacifiCorp held a technical workshop on the draft CEIP and discussed prospective capacity volumes and costs associated with demand response actions identified in the CEIP.

On November 15, 2021, PacifiCorp met with the demand response advisory council staff lead from the Northwest Power and Conservation Council and discussed the California Demand Response Protocol utilized by PacifiCorp for evaluating their programs. Discussion focused on similarities between the council' approach and the protocol and how costs and benefits were included in the total resource cost test calculations.

On November 17, 2021, PacifiCorp met with the EAG providing further detail on draft demand response actions included in the CEIP.

On April 13, 2022, the Company presented the draft program requirements, participation parameters for discussion and requested specific feedback from the EAG regarding program marketing and partnership strategies.

On April 28, 2022, the Company presented both draft irrigation program information and general information on cost effectiveness, reporting and cost recovery for demand response to the Washington DSM Advisory Group.

On June 15, 2022, the Company presented information on non-energy impacts of demand response to the Equity Advisory Group and requested feedback on potential NEIs to monetize and apply to demand response for the 2023 CPA

On September 8, 2022, during a DSM Advisory Group meeting, the Company presented information on demand response potential for all sectors including residential that will be included in the 2023 Conservation Potential Assessment.

Stakeholder Involvement – residential demand response program

On December 7, 2022, during an Equity Advisory Group meeting, the Company provided information on the contracting, outreach and estimated filing schedules for the residential demand response program.

On January 10, 2023, the Company hosted a technical workshop to educate and inform on the proposed residential demand response program and seek feedback on the proposed design. The workshop was attended by 23 participants representing 13 organizations. Presentation materials and meeting notes were posted on January 24, 2023

On February 9, 2023, during an Equity Advisory Group meeting the Company presented information to help illustrate the core concepts of demand response and provided an overview of the draft program design for residential customers.

On March 9, 2023, during an Equity Advisory Group meeting the Company presented additional information on the draft program design for residential customers.

On March 30, 2023 during a DSM Advisory Group meeting, the Company provided a brief update on when the draft filing would be available to the group for comments.

On April 19, 2023, the Company provided a copy of the draft filing for the residential demand response program to the DSM Advisory Group and requested comments no later than May 5, 2023.

On April 28, 2023, Public Counsel requested that more information about resources available to income qualified to overcome barriers, especially WiFi access, be easily accessible. Public Counsel also suggested a follow-up conversation with the Energy Project on how best to engage income qualified customers and help them participate.

On May 15, 2023, the Company added language to this advice filing about plans to provide information on WiFi access programs and targeted outreach to community action agencies. Arranging the follow-up conversation with the Energy Project is underway.

It is respectfully requested that all formal data requests regarding this matter be addressed to:

By email (preferred): datarequest@pacificorp.com

By regular mail: Data Request Response Center
PacifiCorp
825 NE Multnomah, Suite 2000
Portland, OR 97232

Please direct any informal questions about this filing to Ariel Son, Regulatory Affairs Manager, at (503) 813-5410.

Sincerely,

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Enclosures
220848-PAC-Amended-Pet-5-19-23.pdf
220848-PAC-Exh-A-5-19-23 (R).pdf
220848-PAC-Exh-A-Load-Control-Thermostat-Summer-Winter-2023-IRP-5-19-23 (C).xlsb
220848-PAC-Exh-A-Load-Control-WaterHeaters-2023-IRP-5-19-23 (C).xlsb
220848-PAC-Exh-A-Residential-CE-Summary-2023-IRP-5-19-23 (C).xlsx
220848-PAC-Exh-B-5-19-23.pdf