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

RE: DO NOT REDOCKET—Docket UE-220848—PacifiCorp's Cool Keeper Demand Response Program under Schedule 106

PacifiCorp d/b/a Pacific Power & Light Company (PacifiCorp) proposes the enclosed Cool Keeper demand response program under Tariff Schedule 106—Demand Response. The Company requests a March 28, 2025 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 includes valuable commercial information, including confidential information and analysis related to the Cool Keeper demand response program. Disclosure of such information would harm PacifiCorp by providing an unfair 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 (CEIP) and Docket UE-220550, the Company proposes to introduce a cooling load control program under the provisions of Schedule 106.

PacifiCorp will recover costs through Schedule 191 consistent with recovery of costs for other approved/accepted demand response programs. PacifiCorp will include details about the Cool Keeper program in its biennial CEIP updates. As outlined at the end of this filing, PacifiCorp has shared program details with the appropriate advisory groups and sought feedback before implementing the new program.

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

The filing is part of the continuing implementation of resources outlined in the Clean Energy Implementation Plan as part of the Company's compliance with the Washington Clean Energy Transportation Act (CETA). Demand response needs for Washington were further clarified in the Company's Clean Energy Implementation Plan (CEIP) where 37.4 MW of demand response were targeted through 2025. Cool Keeper, the program described in this filing, serves as an alternative design to the "Bring Your Own Thermostat" program anticipated in the 2021 CEIP.

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, 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, 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 programs.

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.

III. Cool Keeper Program

PacifiCorp proposes to establish a cooling load control program (Cool Keeper or Program) for its Washington customers under Schedule 106, as described in the following sections A through I.

A. Background

In 2023, the Company used the provisions of Schedule 106 to introduce a program for residential water heaters and smart thermostats controlling cooling systems, known as Optimal Time Rewards.[1] Participant data revealed that per-unit performance, particularly for water heaters, was significantly less than anticipated. The Company determined that Optimal Time Rewards could not be cost-effectively operated, and terminated it on November 15, 2024. This decision was reviewed with the Pacific Power DSM Advisory Group (DSM AG) and Equity Advisory Group (EAG) during the joint DSMAG and EAG meetings on Sept. 12, 2024 and Dec. 12, 2024.

[1] PacifiCorp filed the Residential Demand Response Program on May 19, 2023, under Docket No. UE-220848.

The Cool Keeper program is an alternative, cost-effective mechanism for leveraging residential cooling load as a grid management resource. PacifiCorp has operated the Cool Keeper program in Utah for over a decade.[2] The program design and technology have a proven track record. In addition, expanding an existing program from another PacifiCorp territory to Washington reduces start-up costs and streamlines internal operations.

B. Cool Keeper Program Proposal

The Program installs load control switches on the compressor unit of residential & small commercial-size air-conditioning and heat pump systems, to enable aggregated use of this load for grid management. Utility customers receive a monthly bill credit during the summer season for participation in the program, including allowing periodic curtailment of power to their compressor. The resource will be dispatched to provide curtailment capacity to respond to grid management needs such as peak management, contingency reserve, frequency response, etc. Cool Keeper will initially be used at the balancing authority level. But participants may be configured into region-based groups to allow more localized grid management in the future, such as providing non-wires alternatives to distribution system upgrades.

C. System Configuration and Dispatch Period

The load control receiver (LCR) is a proprietary switch device that uses a cellular data network to communicate with a central software platform. The platform records incoming data from the switches and communicates dispatch signals. The software is integrated to the Company's internal grid management system, allowing for automated dispatch and manual dispatch through the internal system interface. The Company power operations team may dispatch Cool Keeper manually for supply interruptions (contingency reserve), peak management and other grid needs, while dispatch for frequency events will be automated.

The nature of the cooling system load determines the dispatch parameters for this program. The program will operate on a seasonal basis, from May 1 through September 30. Available dispatch hours will be 2:00 PM to 9:00 PM, Pacific time, for a maximum of four hours per day and 100 hours per year. All dispatches are instant, and may last from 5 minutes (for frequency response) up to 4 hours (for contingency reserve and peak load management). For longer events (over 1 hour), the program will utilize a 50% run-time setting. This setting cycles the compressor at 50% of its average runtime each hour. Devices are cycled on or off at different times so the net effect is a consistent level of curtailment over the duration of the event. Similar to a temperature setback on a smart thermostat, this setting ensures participant discomfort is minimized during the event. (For additional details on the dispatch parameters, see Exhibit B.)

Customers are typically never aware a dispatch is taking place. The customer's thermostat and the HVAC fan will continue to operate during a dispatch, and to the extent the system has retained cooling capability, the system will continue to circulate conditioned air. Because the majority of dispatches are over in 5 min, there is minimal impact on the participant.

The Company may work with multiple contractors to administer the program.

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[2] https://www.rockymountainpower.net/savings-energy-choices/home/cool-keeper.html.

D. Customer Participation and Eligibility

The Cool Keeper Program will be available to all retail tariff customers taking service under the Company's electric service schedules listed on Schedule 291 – System Benefits Charge. Both residential and non-residential customers may participate if they have qualifying equipment; however, the Company anticipates that initially, participation will come primarily from residential customers. Customers must have a central cooling system compatible with the LCR.

Customers may participate by completing a simple application form online that collects the customer's name, address, and contact information; customers can also apply via phone. Renters must get landlord approval, using a form that will be available on the program website. The program administrator will verify the customer's account, and then will call the applicant to determine if the unit is outside and can be accessed from the street. Most compressor units are accessible from the street, so the participant does not need to be home during the installation. If the compressor unit is not accessible an appointment will be scheduled.

The LCR is provided free of charge to the participant. Customers are not charged for devices that are damaged or lost.

E. Marketing Approach

PacifiCorp will utilize a multi-channel marketing approach to promote the program. The marketing strategy will be designed to target promotion as much as possible to only eligible areas, while still ensuring the program messaging is widespread and accessible to different eligible customer groups. PacifiCorp expects the primary driver of enrollment to be door-to-door canvassing, which has been shown to be extremely effective in the Utah service area. The program will also use email blasts to customers in eligible areas, including special messaging to past participants in Energy Trust of Oregon rebate programs and past participants in the Optimal Time Rewards program. Digital advertising, education and material development for Energy Trust Trade Allies, and cross promotion with other energy programs may also be used.

F. Incentives

Customers will receive a recurring incentive for participation in the program. The annual incentive amount is paid out in 5 equal installments as a monthly bill credit during the dispatch season. Table 1 provides the incentive levels for Program enrollment and annual participation incentives. Although the program allows systems up to 20 tons to participate, the great majority of participation is expected to be smaller systems from 1-4 tons.

Table 1. Cool Keeper Incentives

Cooling System	Maximum Annual Incentive	Monthly Bill Credit Amount
Up to 15 tons	$30	$6
15 – 20 tons	$60	$12

G. Projected Program Costs and Participation Rates

The Cool Keeper Program is expected to achieve 24,000 participants, and provide approximately 48 MW of maximum demand response capacity, by 2029. Due to the logistics involved in installing the load control device, the program may only be available in certain locations in the

early years. PacifiCorp expects to gradually expand to the rest of the state. In the initial years, the upfront cost to procure and install LCRs will make up a majority of the total cost. By the program's 5th year, the majority of the cost will be to administer and maintain the growing network, followed by the cost of incentives for program participants. Table 2 provides a breakdown of estimated program costs by category for 2025 through 2029. Table 3 provides a 6-year outlook of projected participation.

Table 2. Estimated Annual Program Participation and Available Capacity

	2025	2026	2027	2028	2029
Incremental Participation	6,000	8,000	4,000	4,000	2,000
Cumulative Participation	6,000	14,000	18,000	22,000	24,000
Cumulative Capacity (MW)	12	28	36	44	48

Table 3. Estimated Program Costs by Category

	2025	2026	2027	2028	2029
Program Administration	$1,932,083	$2,241,252	$1,797,838	$1,922,499	$1,662,528
LCRs	$1,034,400	$1,415,200	$773,600	$797,600	$476,800
Incentives	$180,000	$420,000	$540,000	$660,000	$720,000
Program Management (PacifiCorp)	$50,000	$50,000	$50,000	$50,000	$50,000
TOTAL	**$3,196,483**	**$4,126,452**	**$3,161,438**	**$3,430,099**	**$2,909,328**

H. Annual Reporting

PacifiCorp will provide an annual report for the Cool Keeper Program by March 31 of the following year with information such as participating customers, aggregate impacts, incentive and non-incentive expenditures, enrollment changes, customer service/satisfaction, and cost effectiveness. The first comprehensive report will be filed in 2027, after the program has completed a full year of program operation.

I. Cost Recovery

PacifiCorp proposes to utilize the existing deferral docket for Schedule 106 programs, Docket UE-220848, to track the costs associates with the Cool Keeper Program, and to recover the approved Cool Keeper Program costs, similar to other demand response programs, through its Schedule 191.[3] The Company is not proposing a change to Schedule 191 as part of this filing.

J. Cost Effectiveness

The Cool Keeper Program is forecast to be cost-effective over a 10-year timeframe under the Total Resource Cost Test (TRC), with and without the conservation adder. The program is also cost-effective under the Utility Cost Test (UTC) and Rate Impact Test (RIM) tests. As avoided costs are considered proprietary on load control programs, the cost effectiveness results are provided in Table 4 with a "pass" and "fail" designations, which equate to a benefit to cost ratio

[3] *In the Matter of PacifiCorp d/b/a Pacific Power & Light Company Accepting Tariff Revisions to WN U-76, Schedule 191.1 System Benefit Charge Increase, Subject to Conditions,* Docket No. UE-240393, Order 01 (Aug. 30, 2024).

of 1.0 or better. Due to the nature of demand response, and consistent with the cost effectiveness methodology for other demand response programs, the Participant Cost Test is not applicable. Additional detail on these results is provided in Confidential Exhibit A.

Table 4. Cool Keeper Program Level Cost Effectiveness Results

Benefit/Cost Test	Benefit/Cost Ratio
PacifiCorp Total Resource Cost Test (PTRC) + Conservation Adder	Pass
Total Resource Cost Test (TRC) No Adder	Pass
Utility Cost Test (UTC)	Pass
Rate Impact Test (RIM)	Pass
Participant Cost Test (PCT)	N/A

K. Stakeholder Involvement

PacifiCorp has conducted extensive outreach with stakeholders as part of its process to develop the CEIP, and to establish Schedule 106. These efforts are detailed in the 2021 CEIP and UE-220550, respectively. In addition, the Company has engaged in numerous meetings and presentations with different groups of stakeholders to discuss residential demand response using AC load (via smart thermostats) for the now-cancelled Optimal Time Rewards program, and to discuss the Cool Keeper program specifically. The stakeholder processes PacifiCorp utilizes to develop demand response programs are outlined in both its approved CEIP and Schedule 106.

On March 26, 2024, the Company presented its draft DSM budget for 2025 to the DSM AG. This presentation included detail on the breakout of costs between energy efficiency and demand response programs.

On May 10, 2024, the Company presented its proposed increase to the SBC rate to the DSM AG.

On Sept. 12, 2024, the Company presented the initial results of the first dispatch season for Optimal Time Rewards, including the finding that the water heater component was providing significantly less capacity than anticipated, and part or all of the Optimal Time Rewards program would need to be cancelled.

On Oct. 29, 2024, the Company presented on the results to date of the demand response portfolio, and the Company's progress and forecast for achieving the CEIP target of 37.4 MW of demand response capacity.

On Dec. 12, 2024, the Company presented proposed changes for existing DR programs and proposed new programs to continue building out the DR portfolio in Washington, including Cool Keeper.

Sincerely,

/s/ *Matthew McVee*

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Enclosures

220848-PAC-Exh-A-2-18-25 (C).pdf
220848-PAC-Exh-B-2-18-25.pdf
220848-PAC-WP-CoolKeeperAnalysis-2-18-25 (C).xlsm
220848-PAC-Placeholder-2-18-25 (R).pdf