

PUBLIC UTILITY COMMISSION OF OREGON  
STAFF REPORT  
PUBLIC MEETING DATE: April 9, 2019

REGULAR  X  CONSENT \_\_\_\_\_ EFFECTIVE DATE  April 10, 2019

DATE: April 2, 2019

TO: Public Utility Commission

FROM: <sup>JTB & TF</sup>  
Thomas Familia

THROUGH: <sup>E</sup> Jason Eisdorfer and <sup>JPS</sup> JP Batmale

SUBJECT: PORTLAND GENERAL ELECTRIC:  
(Docket No. ADV 859/Advice No. 18-04): Introduces New Schedule 13,  
Opt-Out Residential Demand Response Testbed Pilot.

**STAFF RECOMMENDATION:**

Staff recommends that the Commission approve Portland General Electric Company (PGE or Company) Advice No. 18-04, creating Schedule 13, to institute its new Opt-Out Residential Demand Response (DR) Testbed Pilot, for service rendered on and after April 10, 2019, on less than statutory notice.

**DISCUSSION:**

Issue

Whether the Commission should approve PGE's new Schedule 13 Opt-Out Residential Demand Response Testbed Pilot, for service rendered on and after April 10, 2019, on less than statutory notice.

Applicable Law

- ORS 757.205 requires that public utilities file all rates, rules, and charges with the Public Utility Commission of Oregon (OPUC or Commission).
- ORS 757.210 establishes a hearing process to address utility filings and requires rates be fair, just and reasonable.

- ORS 757.689 sets forth requirements for including the costs of energy conservation measures in rates of electric companies, other than those acquired through ORS 757.612.
- OAR 860-022-0025 requires that new tariff filings include statements showing the new rates, the number of customers affected, the impact on annual revenue, and the reasons supporting the proposed tariff.
- Tariff filings to be effective on less than 30 days following notice of the change may be authorized with a waiver of less than statutory notice pursuant to ORS 757.220 and OAR 860-022-0020.

### Analysis

#### *Schedule 13 Opt-Out Tariff*

The purpose of this advice filing is to establish the opt-out tariff necessary for the Demand Response Testbed. Schedule 13 provides the enrollment and communication mechanism for the DR Testbed launch.

On October 24, 2018, PGE filed Advice No. 18-04, requesting an effective date of April 1, 2019 for its new opt-out residential Pilot tariff, Schedule 13.

PGE made a supplemental filing, on less-than-statutory notice at the request of Staff, extending the effective date from April 1, 2019 to April 10, 2019. The pilot is offered through June 30, 2022.

This advice filing only covers the costs associated with Schedule 13. It does not cover the DR testbed expenses. However, given the relationship of the Schedule 13 tariff to the PGE testbed, it is important to review the testbed plan itself as part of this process. Cost recovery filings for the DR Testbed expenses, which are incremental to other DR pilot costs, will come later.

In short Schedule 13 creates an opt-out monetary incentive of \$1.00 per kWh decrease during Peak Time Rebate (PTR) events for the approximately 20,000 residential customers in the DR Testbed areas. Schedule 13 also serves as DR Testbed's platform to assess a number of possible customer value propositions to encourage customers' participation in all of the other, complementary Opt-in DR pilots being offered by PGE.

All customers in the geographic territory of the DR Testbed will be automatically enrolled into Schedule 13. Participants will receive notifications from PGE to shift their energy usage during PTR events. Participating customers must choose at least one of PGE's offered methods for receiving the PTR event notifications, which include email,

text, or phone call. PGE will also post notifications on PGE's website. PGE will notify participating customers the day before a PTR event, as well as providing follow-up reminders to the participants.

Customers may opt-out of PTR notifications. They will no longer be notified by PGE of PTR events and they will also be ineligible for monetary incentives for decreased energy usage during future PTR events.

#### *Accelerating the Development of Demand Response*

In final comments to PGE's 2016 IRP, Staff noted the prolonged timeframes of the Company's development of DR from pilots to programs.<sup>1</sup> Difficulties of obtaining DR in the region may be attributable to 1) the relatively low energy prices in the region that hinder monetary incentive success with the customer base, and 2) the winter peaking nature of PGE's service territory relating to customer difficulty in shifting load during periods of cold weather. PGE's proposal in this testbed is to move the focus to some degree away from viewing DR adoption strictly through a widget cost effectiveness lens, to more closely examine the optimal customer value propositions towards accelerating customer DR adoptions. PGE intends to explore a number of customer value propositions including a focus on a decarbonization narrative and a consideration of customer incentive aggregation towards community schools/charity funding.

PGE is proposing this DR Testbed to accelerate the development of DR according to the Commission requirements of the Company's 2016 IRP acknowledgement:<sup>2</sup>

1. Through 2020, acquire at least 77 MW (winter) and 69 MW (summer) of new DR resource as a floor, while working to reach the demand response high case targets of 162 MW (summer) and 191 MW (winter);
2. Hire a third party to conduct a study for demand response specific to PGE's service territory with results in time to inform PGE's subsequent IRP;
3. Work with Staff to establish, manage, and support a "Demand Response Review Committee" to assist in the development and success of PGE's DR activities including review of PGE's proposals for demand response programs; and

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<sup>1</sup> See Public Utility Commission of Oregon, Docket LC 66 Final Staff Comments, Appendix A (May 12, 2017).

<sup>2</sup> Commission Order 17-386, Docket LC 66 at page 9. Available at <https://apps.puc.state.or.us/orders/2017ords/17-386.pdf>.

4. Within nine months (of August 8, 2017), present multiple viable demand response test bed sites to the Demand Response Review Committee, and by July 1, 2019, establish a demand response test bed.

PGE is proposing two phases to the DR Testbed. Phase I is primarily focused on research towards establishing the best customer value proposition(s) to increase DR penetration in the Company's service territory.

PGE will leverage the following established residential DR pilots within the DR Testbed:

- Direct Load Control Thermostat (DLCT) Pilot<sup>3</sup>
- Multifamily (MFR) DR Water Heater Pilot,<sup>4</sup> and
- Pricing Pilot (FLEX Pricing) Pilot<sup>5</sup>

Following a planned two-and-a-half year timeline for the first phase of the Testbed, the second phase of the testbed will focus on the integration of distributed energy resources (DERs). Staff appreciates PGE's design in planning the two separate phases of the Testbed and would highlight the value in exclusively focusing on the methods to increase customer DR adoption in the first phase and to not risk spreading resources too thin by addressing the integration of DERs at the same time.

Over the timespan of the first phase of the Testbed, PGE's plans to acquire ~6 MWs of capacity from the following three community sites covered by the DR Testbed: North Portland, Milwaukie, and Hillsboro.

PGE will place residential customers on the opt-out peak-time rebate (PTR) with a target participation of 66 percent of the share of residential customers in the DR Testbed for whom PGE has email contact information.

Staff recognizes PGE's efforts in choosing the three Testbed sites as a representation of its overall customer base, but would still point to the inherent difficulties of lower-income customers participating in a number of the technology driven opt-in DR pilots. In PGE's early development of marketing strategies and materials, Staff expects to be kept aware of the tactics the Company plans to employ to specifically reach out to its lower-income customer base.

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<sup>3</sup> For current status of the Residential DLCT Pilot see Public Utility Commission of Oregon, Docket No. UM 1708.

<sup>4</sup> For current status of the Residential MFR DR Water Heater Pilot see Public Utility Commission of Oregon, Docket No. UM 1827.

<sup>5</sup> For current status of the Residential Pricing Pilot see Public Utility Commission of Oregon, Docket No. UM 1708 and PGE Advice No. 19-03.

*Testbed Approach for Commercial and Industrial Customers*

For the non-residential DR program's inclusion in the Testbed, PGE is targeting a participation rate of 25-40 percent. The Company plans for the program's Testbed activities to include targeted marketing and dedicated outreach. These efforts will be incremental to the program's "business as usual" operations, towards identifying customer segment-specific ceilings for program participation.

*The Demand Response Review Committee*

PGE has organized the Demand Response Review Committee (DRRC) to guide the development of PGE's DR Testbed. The DRRC is a subject matter expert group that provides guidance and advice to PGE staff on their DR pilots and the overall DR portfolio. The Committee includes the membership of the Energy Trust, NEEA, Pacific Northwest National Lab (PNNL), Oregon Citizens' Utility Board (CUB), Oregon Department of Energy, Alliance of Western Energy Consumers (AWEC), Northwest Power Conservation Council (NWPPCC) Staff, and OPUC Staff.

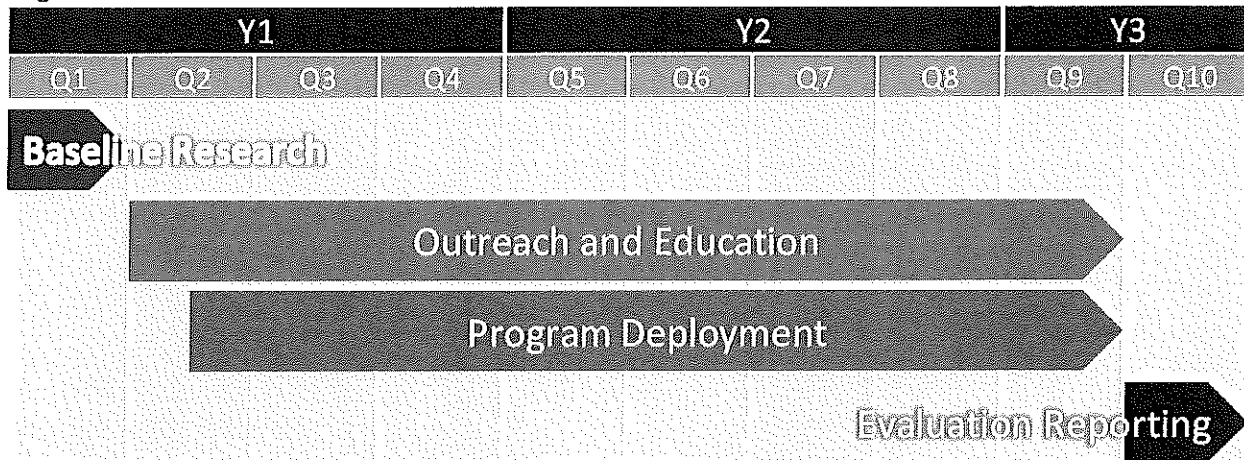
Since PGE established the DRRC in February 2018, it has convened on four occasions and provided good advice and guidance to the Company in the development of the formal DR Testbed application. Staff has found the DRRC's assistance and review of PGE's DR activities to be of high value, and appreciates their work. Staff is encouraged by the work done by PGE's Staff to organize the DRRC and to effectively utilize the Committee.

To this end, Staff would see additional value in partnering more with PGE to strategically leverage the expertise of the DRRC. Specifically, the Company and Staff should collaborate more in formulating the processes and reporting mechanisms related to the DR decision points brought before the DRRC. This will be especially important given the fast moving nature of the DR Testbed.

*Timeline of the Testbed*

The figure below provides PGE's DR Testbed Phase 1 timeline. The DR Testbed is composed of four stages: 1) Baseline Research, 2) Outreach and Education, 3) Program Deployment, and 4) Evaluation Reporting.

Figure 1 – PGE DR Testbed Phase 1 Timeline



The baseline research stage will be conducted in the first quarter of the pilot and will be critical in identifying the Testbed customers that are eligible to participate and how they might participate. The baseline research stage will also help to inform the second stage of the DR Testbed, outreach and education. In the outreach and education stage, general awareness of DR will be created. The customer will be familiarized with DR terminology and the need to participate as a community. PTR opt-out will be leveraged to deploy a general awareness and communication campaign. PGE plans to leverage key community leaders such as neighborhood associations or environmental groups.

Staff appreciates the level of detail provided in PGE’s Testbed application related to both the Baseline research and Outreach and Education stages, as well as the necessity for the approval of PGE’s pilot for the Company to expend the resources necessary to give substance to the direction outlined. Staff sees these early phases of the project as crucial to the pilot’s access, and as such Staff currently has a number of information requests out to the Company with the expectation that responses will be provided as soon as research findings are available.

The third stage of the timeline, Program deployment, will start shortly after and run in tandem with outreach and education. Program deployment encompasses the bulk of this application’s proposed activities: roll-out of opt-out PTR, migration of customers to DLC pilots and programs, and retention of those customers who did not migrate.

The evaluation activity in the last stage of Phase I Testbed work is expected to help inform PGE, stakeholders, and the Commission of lessons learned around the strategy and activity deployed during the two-year period.

Similar to Staff's comments on the first and second stages of the Testbed, Staff sees value in adding detail to the evaluation criteria presented in PGE's Testbed application. Early in the DR Testbed timeline, Staff requests PGE initiate a workshop wherein PGE presents a variety of evaluation criteria for discussion beyond the higher level participation goals presented in the Company's DR Testbed application.

*Budget*

The table below provides PGE's estimate of total costs for the first phase of the DR Testbed. To note, of the \$5.9 million budget, roughly half of the Testbed's costs (\$3.2 million) are associated with delivering PGE's current, cost-effective DR pilots at scale. The remaining \$2.6 million in costs are towards the development costs associated with the pilot's primary goal of accelerated customer adoption of DR. Again, these costs will not be covered by Schedule 13.

| Budget Category            | Launch (June 2019) | Year 1              | Year 2              | Total               |
|----------------------------|--------------------|---------------------|---------------------|---------------------|
| <b>Development Costs</b>   |                    |                     |                     |                     |
| Marketing                  | \$ 335,000         | \$ 335,000          | \$ 111,000          | \$ 781,000          |
| Research and Evaluation    | \$ 130,000         | \$ 110,000          | \$ 240,000          | \$ 480,000          |
| Staffing                   | \$ 148,000         | \$ 607,000          | \$ 607,000          | \$ 1,362,000        |
| Subtotal                   | \$ 613,000         | \$ 1,052,000        | \$ 958,000          | \$ 2,623,000        |
| <b>Operation Costs</b>     |                    |                     |                     |                     |
| Materials and Equipment    | \$ -               | \$ 1,076,000        | \$ 1,162,000        | \$ 2,238,000        |
| Program Incentives         | \$ -               | \$ 446,000          | \$ 558,000          | \$ 1,004,000        |
| Subtotal                   | \$ -               | \$ 1,522,000        | \$ 1,720,000        | \$ 3,242,000        |
| <b>Testbed Total Costs</b> | <b>\$ 613,000</b>  | <b>\$ 2,574,000</b> | <b>\$ 2,678,000</b> | <b>\$ 5,865,000</b> |

*Cost Recovery*

This advice filing is for the PTR tariff that will be located within the Testbed. PGE will submit an advice filing at a later date relating to the cost recovery mechanism for this opt-out residential pilot, Schedule 13. As Schedule 13 is a non-punitive tariff, meaning that the customer can only benefit from participating in the opt-out PTR. PGE will defer and seek recovery of all pilot costs not otherwise included in customer prices in a separate filing.

Conclusion

Staff is appreciative of the level of detail PGE Staff provided in the documentation, workshops, and communication in general throughout the process of the Company submitting the DR Testbed for Commission approval. Based on its review of PGE's

Advice No. 18-04, Staff recommends that the Commission approve the proposed tariff. However, Staff does see a need for the following items to be addressed over the life of the first phase of the Company's DR Testbed:

1. PGE should focus exclusively on the methods to increase customer DR adoption in the first phase and to not risk spreading resources too thin by addressing the integration of DERs at the same time.
2. Staff should be kept aware of the tactics the Company plans to employ to specifically reach out to its lower-income customer base.
3. A collaboration between PGE and Staff towards further refining processes and reporting mechanisms related to the decision points the DRRC will be advising PGE's on, especially the accelerated DR testbed timeline.
4. As available, PGE should provide more visibility to Staff into research marketing materials relating to the Baseline Research stage and the Outreach and Education stage of the DR Testbed timeline.
5. Early in the DR Testbed timeline, a workshop should be conducted where PGE presents a variety of evaluation criteria for discussion beyond the higher level participation goals presented in the Company's DR Testbed application.

**PROPOSED COMMISSION MOTION:**

Approve PGE's Advice No. 18-04, creating Schedule 13, to institute its new Opt-Out Residential Demand Response Testbed Pilot, for service rendered on and after April 10, 2019, on less than statutory notice.