

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

REGULAR CONSENT EFFECTIVE DATE April 10, 2019

DATE: April 3, 2019

TO: Public Utility Commission

FROM: George Compton and Thomas Familia

THROUGH: Jason Eisdorfer, John Crider, and JP Batmale

SUBJECT: PORTLAND GENERAL ELECTRIC: (Docket No. ADV 920/
Advice No. 19-03): Requests Update to Schedule 7 Tariff Relating to
Flexible Residential Pricing Program.

STAFF RECOMMENDATION:

Staff recommends that the Public Utility Commission of Oregon (or Commission) authorize the Portland General Electric Company (PGE or Company) to update its Residential Schedule 7 to incorporate an Optional Peak Time Rebate Program as described in its Supplemental Filing.

DISCUSSION:

Issue

Whether the Commission allows PGE to update its Residential Schedule 7 to incorporate an Optional Peak Time Rebate Program.

Applicable Law

ORS 757.210 requires fair, just and reasonable rates. OAR 860-022-0025(2) and -0030(1) require a utility proposing a rate change to provide certain information such as the amount of any rate change, number of customers affected, and reason for rate change.

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

Background

Pursuant to Commission Order No. 17-386¹ PGE established two residential pilot programs whose goal was to produce 77 MW of demand response (DR) peak load reduction capability in winter months and 69 MW in the summer. One of the pilots involved direct thermostat load controls. The other pilot, labeled Flex 1.0, was the first phase of the “Pricing and Behavioral Response Pilot.” Carried out during 2015-2018, it deployed time of use pricing (TOU²) and peak time rebate (PTR³) incentives to induce customers to shift their demands away from high peak-load hours/periods. The second phase of the latter pilot is the subject of this Advice Filing application. It is known as Flex 2.0.

Participating in Flex 1.0 were fourteen thousand customers assigned randomly to twelve different program alternatives, including three TOU-only, three PTR-only, and three TOU-PTR hybrid rate designs. Three PTR rebate incentive levels were also involved.⁴ PGE contracted with the Cadmus consulting firm to make findings regarding customer satisfaction and the achievement of desired load reductions. Cadmus completed its evaluation of Flex 1.0 in June of 2018. The Company’s intent was to use the information obtained from Flex 1.0 to justify its Flex 2.0 recommendations for updating its primary residential tariff, Schedule 7. While Schedule 7 is a permanent tariff, enrollment in the PTR portion—under pilot auspices—was to be limited to around 100,000 customers.

The PTR element of the updated Schedule 7 also is to apply to customers enrolled in the “NEW Schedule 13 Opt-Out Residential Demand Response Testbed Pilot.”⁵

¹ See page 9.

² Prices are time-differentiated according to underlying costs. The simplest Flex 1.0 TOU design has 6 am to 10 pm, Monday through Friday, as the On Peak/higher-price period, and everything else designated as the Off Peak period. With the other alternatives both the summer and winter TOU week-day rate designs designated 3pm – 8pm as an on-peak period, with a 7am – 11am on-peak period added in the winter. Finally, one of the TOU alternatives added mid-peak periods to the mix.

³ A PTR window is established (e.g., 3pm to 8 pm on July through September weekdays) when loads are more likely to be high and stressful to the system. Not more than ten times in the summer or winter season customers will be notified a day ahead that incentives (e.g., \$1 per kWh of reduced load) will be rewarded for observed load reductions that occur during the designated day’s PTR window.

⁴ They were \$2.25/kWh, \$1.55/kWh, and \$0.80/kWh.

⁵ See PGE Advice No. 18-14. Original Sheet No. 13-2 states, “Customers participating in this Pilot will continue to pay all fees and charges in Schedule 7. In addition, should the Customer reduce energy use during [PTR] events, the Customer will receive a PTR Event Credit of \$1.00 per kWh.”

Initial Filing

On February 8, 2019 the Company filed this Advice No. 19-03, Schedule 7 PGE's Flexible Residential Pricing Program. The requested effective date was May 1, 2019. The purpose of this filing was to add a PTR option to the current Schedule 7 and to *replace* the current Schedule 7 TOU with a much simpler version that lined up in a hybrid fashion with the PTR windows. Simplicity in both PGE billing systems operation and in persuading customers to participate in the new TOU-PTR hybrid was the justification for wanting to eliminate the existing Schedule 7 TOU.⁶ Justification for favoring the TOU-PTR hybrid: "The Cadmus evaluation revealed that hybrid treatments, which combined TOU pricing with PTR incentives, resulted in the highest demand savings of those scenarios tested in Flex.1.0. Satisfaction was also high for those customers who saved on the hybrid plan...."⁷

Unfortunately the positive Cadmus findings were limited to the summer period outcomes. A key Flex 1.0 design flaw prevented a favorable appraisal of any of the winter TOU-only or TOU-PTR hybrid rate patterns.⁸ In the interest of having the fully augmented Schedule 7 up and running for the 2019 summer air-conditioning season, PGE chose for its Flex 2.0 offering to incorporate winter TOU and TOU-PTR hybrid rate patterns that are identical to its favored summer rate/incentive designs. Staff objected. Conscious of the near-crisis February experience in meeting peak loads, Staff insisted that something be put in place that better addressed the distinctive winter load peaks.⁹ Staff also registered concern regarding the potential for losing the favorable cost-causation elements found in the current Schedule 7 TOU rate design.

Supplemental Filing

On March 28, 2019, the Company made a supplemental filing to this Advice No. 19-03, titled "NEW Schedule 7 Residential Pricing Program" to address Staff's concerns.¹⁰ The TOU portion (both winter and summer) of the initial filing is being withdrawn pending further efforts to work with Staff to find a mutually agreeable replacement for that part of the updated Schedule 7.

⁶ Current enrollment in Schedule 7 TOU is 2,688 residential customers.

⁷ See page 10 of "Flex 2.0—PGE's Residential Pricing Program."

⁸ The problem was in having almost twice as many on-peak billing hours in the winter than in the summer for most of the options. While the summer on-peak period was primarily 3pm to 8 pm, the smallest winter on-peak periods combined a four-hour morning peak (7am to 11am) with the same five-hour afternoon-early evening peak as the summer—for a total of nine hours in the winter versus five in the summer. Due to more winter on-peak hours combined with a slightly higher winter on-peak price, "TOU and PTR hybrid customers had lower satisfaction in winter, as demand saving or shifting proved challenging for them in this season and they voiced concern about winter bill increases." See page 10 of "Flex 2.0—PGE's Residential Pricing Program."

⁹ The summer peak starts in mid-afternoon and extends into the early evening. Winter is dual-peaking, with a morning peak and an early evening peak (but not in the afternoon).

¹⁰ Minor corrections to this Supplemental Filing were received on March 29.

However, the primary feature of the supplemental filing is to add a morning PTR window to what was previously filed as solely an afternoon/early evening PTR window.¹¹ The desire is to have a Commission-ruled-upon PTR option within the Schedule 7 tariff by this May 1 in order to accommodate PTR-demand response customer enrollment prior to the June 1 summer event season.

Adding the morning PTR window provided interim satisfaction to Staff that winter's peaks were being recognized. It is also noteworthy that the morning PTR window addition is essential to accommodate the new residential opt-out Schedule 13.¹²

As stated on the first page of this supplemental filing, "This [PTR] update is intended to accommodate future modifications to TOU. The time of calling PTR events may change depending on the [ultimate] TOU design." Refining the TOU and PTR schedules is a work in progress. As indicated earlier, reinforcing PTR windows by embedding them as a hybrid within a TOU framework enhances the demand-response effectiveness of the PTRs. But how to do that is not clear-cut. A principle to be kept in mind is that neither billing periods nor PTR windows should lose their connections with underlying system costs and the attendant abilities to produce strong demand response values.

*A Note on DR Program Cost-Effectiveness*¹³

Guideline 7: Demand Response of IRP Order No. 07-002 states: "Plans should evaluate demand response [DR] resources, including voluntary rate programs, on par with other options for meeting energy, capacity, and transmission needs (for electric utilities) or gas supply and transportation needs (for natural gas utilities)." A benefit-cost ratio greater than one for the Total Resource Cost (or TRC) Test has generally been accepted as sufficient for meeting this guideline. But this Commission needs to be apprised of the fact that meeting that test does not preclude utility rates' being greater than they would have been absent the DR program. The TRC test leaves out the single largest revenue requirement component of a PTR program—the paid PTR incentives themselves.¹⁴ Staff intends to conduct a future investigation into the cost-benefit matter.

¹¹ The original advice filing designated 3pm to 8pm as the weekday PTR window for both the summer and the winter PTR event seasons. The supplemental filing adds 7am to 11am windows for both seasons.

¹² See PGE Advice No. 18-14. Original Sheet No. 13-2 states, "During the Winter Event Season, PGE may call a PTR event in the morning hours or the evening hours, but not both." Absent the morning-augmented PTR window definition for the updated Schedule 7, Schedule 13 would not have a Schedule 7 element that addressed the winter season event description.

¹³ See pages 20 and 21 of "Flex 2.0—PGE's Residential Pricing Program" for a presentation of quantitative results for four different cost-benefit tests.

¹⁴ The rationale for disregarding that ratepayer/revenue requirement burden is that the incentive payments constitute an income redistribution to other ratepayers, i.e., the program participants, via their bill credits.

Conclusion

Pilot studies, past and ongoing, are pursuant to a Commission objective of achieving a significant degree of peak load reduction through customer demand reduction programs. Residential Schedule 7, as updated according to the content of the Supplement to Advice No. 19-03, is consistent with that Commission objective.

PROPOSED COMMISSION MOTION:

Authorize the Portland General Electric Company to update its Residential Schedule 7 to incorporate an Optional Peak Time Rebate as described in its Supplemental Filing.