ORDER NO. 09-395

ENTERED 10/02/09

BEFORE THE PUBLIC UTILITY COMMISSION

OF OREGON

UM 1427

In the Matter of PORTLAND GENERAL ELECTRIC COMPANY Application for Deferred Accounting of Revenues and Expenses Associated with a Residential Critical Peak Pricing Pilot.	ORDER

DISPOSITION: DEFERRED ACCOUNTING APPROVED

On April 24, 2009, Portland General Electric Company (PGE) filed a request with the Public Utility Commission of Oregon (Commission), pursuant to ORS 757.259, to defer revenues and expenses associated with a residential critical peak pricing pilot, effective April 24, 2009. A description of the filing and its procedural history is contained in the Staff Report, attached as Appendix A, and incorporated by reference.

At its Public Meeting on September 22, 2009, the Commission adopted Staff's recommendation, which included not acting on PGE's request to defer revenues associated with the difference between revenues under the pilot and revenues under the standard residential tariff schedule.

ORDER

IT IS ORDERED that:

1. Portland General Electric Company's request to defer incremental program costs associated with the residential Critical Peak Pricing pilot, effective April 24, 2009, is approved.

2. Portland General Electric Company's request to waive Statutory Notice and allow the Schedule 12 tariff sheets filed on September 17, 2009, in Advice No. 09-05, to become effective September 23, 2009, is approved subject to the conditions listed in Appendix A.

Made, entered, and effective OCT 02 2009.

BY THE COMMISSION:

Becky L. Beier

Becky L. Beier
Commission Secretary

A party may request rehearing or reconsideration of this order pursuant to ORS 756.561. A request for rehearing or reconsideration must be filed with the Commission within 60 days of the date of service of this order. The request must comply with the requirements in OAR 860-014-0095. A copy of any such request must also be served on each party to the proceeding as provided by OAR 860-013-0070(2). A party may appeal this order by filing a petition for review with the Court of Appeals in compliance with ORS 183.480-183.484.

ITEM NO. 1 & 2

PUBLIC UTILITY COMMISSION OF OREGON
STAFF REPORT
PUBLIC MEETING DATE: September 22, 2009

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

DATE: September 17, 2009

TO: Public Utility Commission

FROM: George R. Compton and Carla Owings

THROUGH: Lee Sparling, Marc Hellman, Ed Busch, Judy Johnson and Steve Storm

SUBJECT: PORTLAND GENERAL ELECTRIC: (Advice No. 09-05) Institutes, on a pilot basis, a Residential Critical Peak Pricing demand response program.

PORTLAND GENERAL ELECTRIC: (Docket No. UM 1427) Requests deferred accounting for costs associated with the Residential Critical Peak Pricing pilot program.

STAFF RECOMMENDATION:

Staff recommends the Commission approve:

1. Portland General Electric's request to defer incremental program costs associated with the Residential Critical Peak Pricing (CPP) pilot, effective April 24, 2009; and

2. Portland General Electric's request to waive Statutory Notice and allow the Schedule 12 tariff sheets filed on September 17, 2009, in Advice No. 09-05, to become effective September 23, 2009, subject to the following conditions:

   A. Portland General Electric (PGE or the Company) is directed to file reports on this experimental tariff no later than six months after each of the first and second year of the two-year experiment is concluded. The reports are to include estimated changes in participants' consumption behavior, an estimation of costs avoided by the Company resulting from usage changes, an analysis of any difference in revenues collected under Schedule 12 as compared with what would have been collected under Schedule 7, an accounting of incremental program costs associated with setting-up and conducting the CPP pilot program, and an analysis of actual cost/benefits of this experiment as well as projected cost/benefits associated with a large scale implementation of a residential critical peak pricing program.

B. Thirty days prior to each annual Schedule 105 advice filing the Company is directed to submit a status report on the CPP Program Costs Balancing Account, with the report to document accruals and interest calculations. These reports shall document the methods by which the Company determined that the program costs were incremental to other costs associated with Advance Metering Infrastructure (AMI) or with other ongoing programs or initiatives.

DISCUSSION:

Demand Response (DR) represents an important means by which electric utilities can mitigate peak capacity costs. A key element of DR is the ability to impose, with suitable customer notification, prices that better reflect the very high costs confronting the utility during critical peak periods of demand. The introduction of programmable *communicating* thermostats (PCTs) accommodates another DR dimension—the power of the utility to control, at the direction of the customer, the operation of certain appliances within a household during high cost periods.

To enable PGE, regulators, and other interested parties to better understand how residential customers who possess different kinds of appliances (e.g., space heaters, central air conditioners) and different load control capabilities (e.g., conventional programmable thermostats, PCTs) might respond to extraordinary prices in effect during critical peak times, the Company has proposed its Schedule 12, CPP, two year pilot study program. The pilot will also provide some indication of customer acceptance and satisfaction with critical peak pricing.

The pilot is designed to make load comparisons between the following pairs of residential customer groups, where smart meter measurement capability is assumed in all cases:

a) The same customers before and after going switching to the CPP tariff;

b) Customers on the CPP tariff, with or without PCTs, versus standard Schedule 7 customers;

c) Customers on the CPP tariff with and without PCTs;

d) The same customers on the CPP tariff for both years, without PCTs in the first year but with PCTs in the second year;

e) First-year versus second-year trends for CPP tariff customers with PCTs in both years; and

f) First-year versus second-year trends for CPP tariff customers without PCTs in both years.

CPP workshops were held in September and December of 2008, and in February and August (twice) of this year. Attending one or more of the workshops were representatives of Citizens' Utility Board (CUB), Oregon Department of Energy (ODOE), Industrial Customers of Northwest Utilities (ICNU), and Community Action Partnership of Oregon (CAPO), as well as members of the OPUC staff. Staff's consulting expert, Ahmad Faruqui of The Brattle Group, participated by telephone in the early workshops.

Over the course of the workshop process, Schedule 12, and the CPP pilot plan evolved in a number of ways. Most conspicuous has been the introduction of PCTs into the pilot in a major way (i.e., ultimately involving a majority of the participants, and up to 800 PCTs in year one).[1] Strong encouragement at recent workshops by representatives of ODOE was the primary impetus behind the introduction of PGE-provided PCTs to this experiment. Staff endorses the PCT addition; other parties did not object. The purpose of bringing PCTs into the pilot is to see if the substantially greater load reduction experienced by customers in other regions[2] possessing PCTs would be replicated here in the Northwest, and whether the savings from load reductions would justify the additional costs of the PCTs. Other developments in the CPP pilot plan's evolution included the following:

a) Treating Sundays and holidays as entirely off-peak rather than as a standard weekday (i.e., having some on-peak hours);

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1 The research plan is to install the PCTs for about 40% of the participants in the first year, and then to install PCT's in the second year for about two-thirds of the customers who did not have PCTs in the first year of the pilot. This approach provides for the following three behavioral comparisons: 1) separately, year-over-year changes for both the PCT and non-PCT groups; 2) PCT group versus non-PCT group behavior in both years; and 3) behavior change induced by adding a PCT in the second year to customers who didn't have such in the first year.

2 A 2004 Charles River Associates study reported by the Demand Response Research Center in August of 2006 (per a workshop handout provided by ODOE) indicated the following peak load reductions for a typical critical peak day: Simple time-of-use customers—4.1%; critical peak pricing customers without PCTs—12.5%; critical peak pricing customers with PCTs—34.5%.

b) Simplifying the energy charges by having the same set of rates throughout the entire year rather than having different summer and winter prices;[3]

c) Reducing the maximum number of residential pilot participants from 3,500 to 2,000—partly to compensate for the additional costs introduced by the Company-supplied PCTs; and

d) Reducing the maximum number of consecutive critical peak/load reduction days from three to two.

A point of deliberation in the workshops concerned the level of the critical peak price itself, which in the proposed tariff stands at 33.48 cents per kWh for the energy portion of the tariff charges. (The standard weekday on-peak and off-peak prices for Schedule 12 are, respectively, 7.08 cents per kWh and 5.58 cents per kWh.) In the December workshop, PGE proposed 59.8 cents per kWh for the summer and 62.2 cents per kWh for the winter. (The basis for these rates may have been the 59 cents per kWh average critical peak price employed in the California statewide pricing pilot—as reported by Dr. Faruqui.) As some of the December workshop attendees voiced concerns with high critical peak prices scaring away prospective pilot participants, the Company proposed in the February workshop a 25 cent per kWh rate—to which concerns were then expressed about the rate being too low. The current 33 cents per kWh (again, for the energy portion of the tariff charges) proposal represents something of an elevation from the February figure. Since the tariff is designed to be revenue neutral, the tradeoff is between having a critical peak price that is "fearfully" high, versus having the remaining prices that aren't "attractively" low enough. Since the critical peak hours amount to less than 1% of the annual total, a large increase in the critical peak price is required to have a noticeable effect on the non-critical peak prices.

Customer participation in the pilot is optional and, as indicated, will be limited to a maximum of 2,000 eligible residential customers. (Ineligibility comes from already participating in a time-of-use or other demand response program.) Participation will not be limited to customers possessing electric space heating or cooling.[4] Enrollment in the pilot is scheduled to begin September 1, 2010, with service under Schedule 12 commencing on November 1 of that year and ending October 31, 2012. Enrollment, at the customer's choice, may be limited to one season; withdrawal conditions are quite liberal, provided there is reasonable notification. Baseline data gathering will begin in October, 2009—at which time large numbers of Advanced Metering Infrastructure (AMI)

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3 Appropriately, the differentiation between on-peak hours in the summer and on-peak hours for the winter was preserved.

4 Consultant Faruqui encouraged open participation. Prior experience has indicated significant load reduction even by customers who lack electric space conditioning.

interval meters will have been installed throughout the Company's service territory. Having a year's worth of baseline data prior to the customers' CPP pilot activity *per se* should prove invaluable.

Schedule 12's critical peak price only applies when the Company designates a Load Reduction Day (LRD). No more than 10 LRDs will be called in a given season (summer or winter), and no more than two LRDs will be called in immediate succession. The Critical Peak period for a summer LRD is in effect from 4 p.m. to 8 p.m.; the Critical Peak period for a winter LRD is from 6 p.m. to 10 p.m. "Summer" is from May 1 through October 31; "winter" is from November 1 through April 30. Notification (possibly by email or auto-dialing telephone, at the customer's choice) of an LRD must occur by 4 p.m. of the day prior. Once called, an LRD will not be cancelled.

Schedule 12's basic, transmission, and distribution charges are the same as those of Schedule 7. The critical peak prices are embedded in a Schedule 12 time-of-use (TOU) context. The On-Peak/Off-Peak Schedule 12 TOU rate periods are much simpler than the rate periods associated with the optional TOU format within Schedule 7 (where Mid-Peak periods are also designated). On a Standard Day for Schedule 12 (i.e., excluding LRDs, Sundays, and holidays), the summer On-Peak period is from 2 p.m. to 10 p.m. and the winter On-Peak periods are from 7 a.m. to 11 a.m. and from 6 p.m. to 10 p.m. On-Peak periods on LRDs are the same as the On-Peak periods of Standard Days—minus the Critical Peak periods described above.

The prices built into Schedule 12 have been designed to be revenue neutral for a typical customer who does not alter his behavior given the new CPP schedule. Offsetting the high CPP of Schedule 12 is an On-Peak price that is lower than the On-Peak price of Schedule 7. (The Off-Peak price of Schedule 12 is approximately an average of Schedule 7's Mid-Peak price and Off-Peak price.) Schedule 12's On-Peak price is slightly higher than the tail-block rate of Schedule 7; the former's Off-Peak price is significantly lower than the tail-block rate of Schedule 7. Ultimately, customer behavior under Schedule 12 will be influenced by both the tradeoff between the critical peak-price and the remaining prices as well as the tradeoff between the On-Peak and Off-Peak prices.

Customers participating in the pilot may have higher or lower monthly bills than if they had stayed on Schedule 7, with the outcome dependent on their electricity consumption pattern. The proposed tariff does not provide a comparison with the customer's bill as would be charged under Schedule 7. Curious and resourceful customers will be able to make this calculation by referencing the filed Schedule 7 tariff. As indicated above, those who find their bills irremediably higher can quickly cancel their participation in the program.

Special condition 6 of the tariff calls for a Balancing Account to be established, with accrued amounts being recovered through Schedule 105. On April 24, 2009, the Company filed a request to defer the incremental expenses associated with the pilot as well as with differences (positive or negative) in revenues collected from pilot participants under Schedule 12 versus what otherwise would have been collected under Schedule 7. This request was docketed as UM 1427 and was filed pursuant to Oregon Revised Statute (ORS) 757.259 and Oregon Administrative Rules (OAR) 860-027-0300. The most recent Schedule 12 tariff filing omits Balancing Account treatment of the difference between Schedule 12 revenues and what would have been the revenues under Schedule 7. Staff does not rule out such treatment in the future, but wants to give the matter more extensive consideration. Since customers will not actually be billed under Schedule 12 rates until November of 2010, there is ample time to consider this issue and develop a recommendation on the treatment of revenue differences between Schedule 12 and Schedule 7.

PGE requests to record the incremental implementation costs in a variety of FERC operating expense accounts (depending on the nature of the expense). For audit purposes and for purposes of prudence review, Staff requests that PGE set up sub-accounts in order to track the accruals of these program costs and to isolate how these costs are incremental to costs already contemplated in base rates and in the AMI tariff.

Staff requests that PGE submit the accruals with interest calculations, and provide reports on this experimental tariff no later than six months after each of the first and second years of the two-year experiment is concluded. These reports should document how the Company determined that the program costs were incremental to other programs' costs.

In addition, the reports are to include estimated changes in participants' consumption behavior, an estimation of costs avoided by the Company resulting from usage changes, an analysis of any difference in revenues collected under Schedule 12 as compared with what would have been collected under Schedule 7, and an analysis of actual cost/benefits of this experiment as well as projected benefits associated with a large scale implementation of a residential critical peak pricing program.

In order to allow time for discovery and a prudence review, Staff requests that thirty days prior to its annual Schedule 105 advice filing, the Company submit Balancing Account status reports and demonstrate how the program cost accruals with interest calculations are incremental to all other rates and deferrals.

During Staff's review of this application PGE submitted a Supplemental Filing that included a work paper estimating the Company's CPP pilot study cost projections. PGE estimates the total cost to be $2,064,940 (approximately $2.0 million), which is about $400,000 more than the prior estimate for the study not involving PCTs. PGE estimated $90,000 per year of study costs for "Program development and management". Using an approximation of $50/hour (including benefits and payroll taxes), Staff calculates the effects of this to be approximately one full-time employee.[5]

PGE estimated $900,000 of the $2.0 million is associated with billing and other information systems (IS) development during the pre-pilot year.[6] An additional $200,000 is estimated for preparation of customer evaluations and impact assessments following both the first and the final pilot years, bringing the total estimated cost to this point to approximately $1.6 million of the estimated $2.0 million total. The other big-ticket costs are associated with PCT installation and potential PCT removal costs associated with participants opting out of the pilot program prior to the program's conclusion.

Staff believes the $900,000 estimation associated with billing and other IS development is possibly excessive in the context of a pilot study.[7] Staff will review the costs when PGE files to recover the costs recorded in the balancing account. Additionally, Staff will review how the billing and other IS development costs align with PGE's overall long-term planning and development goals to assure that these investments are not contributing to the early onset of technology obsolescence.

Should the standard 30 day additional lead time to implement Schedule 105 prove to be an inadequate amount of time for Staff to review for prudence of costs related to this program, Staff may request the Company withdraw its request to seek immediate recovery on Schedule 105 in favor of later ratemaking treatment of the costs associated with this program.

PGE submitted a request for Federal stimulus funding associated with its AMI project. However, costs associated with this pilot were not pursued due to incompatible timing requirements. Company personnel will be available at the hearing to answer questions regarding the budget projections.

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5 At the time of each annual report, PGE will need to demonstrate that these costs are incremental to current costs included in base rates and that the time dedicated to CPP is the equivalent to one full-time equivalent (FTE) employee, consistent with the labor cost included in this estimate.

6 At the time of each annual report, PGE will need to demonstrate that these costs are incremental to current costs included in rates approved in Docket No. UE 189.

7 Presumably the IS investment will be able to be leveraged in support of future CPP and related program implementation. Such an investment should be compatible with long-term IS roll-over and expansion plans.

Staff believes the terms and conditions of the proposed tariff are reasonable and Staff recommends the Commission approve PGE's request to defer costs and allow the Schedule 12 tariff to go into effect September 23, 2009 with less than statutory notice, subject to the conditions provided in Staff's recommendation.

PROPOSED COMMISSION MOTION:

Staff recommends the Commission approve:

1. Portland General Electric's request to defer incremental program costs associated with the residential Critical Peak Pricing (CPP) pilot, effective April 24, 2009; and

2. Portland General Electric's request to waive Statutory Notice and allow the Schedule 12 tariff sheets filed on September 17, 2009, in Advice No. 09-05, to become effective September 23, 2009, subject to the conditions listed in this memorandum.

PMM PGE Ad No. 09-05 and UM 1427 Critical Peak Pricing