

**BEFORE THE PUBLIC UTILITY COMMISSION
OF OREGON**

LC 48

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| In the Matter of |) | |
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| PORTLAND GENERAL ELECTRIC |) | COMMENTS OF |
| COMPANY 2009 Integrated Resource |) | THE CITIZENS' UTILITY BOARD |
| Plan. |) | OF OREGON ON THE STAFF'S |
| |) | DRAFT ORDER |
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I. Introduction

CUB generally supports the proposed order submitted by the Commission Staff. CUB believes that the order demonstrates the quality of integrated resource planning in Oregon. CUB does, however, have specific comments on three areas of the draft order:

- Boardman Plant Closure
- Demand Response
- Wind Integration

II. Boardman

CUB believes that the Commission Staff has done a very good job of analyzing the various portfolio options that are available to PGE. CUB agrees with Staff that the 2040 Option cannot be acknowledged, but CUB is concerned that the proposed acknowledgement of BART III is too narrow. CUB also encourages the Commission to adopt a recommendation for a stakeholder process to review the utilization of low-carbon resource options in replacing Boardman.

A. 2040

CUB agrees with the Commission that it is not helpful to assume that either BART I or DEQ Option 2 will be the default if the BART III option is not adopted. While BART I and DEQ Option 2 will likely remain on the table when the EQC makes its final decision, other options are also likely to be considered. There is a need to know the full slate of options and compare those before it is reasonable to say whether BART I or DEQ Option

2 should be the default backup plan.

At the same time, CUB has made it clear that if it comes to a choice between BART I and DEQ Option 2, CUB would support DEQ Option 2. PGE has failed to convince CUB that it is likely that Boardman would be allowed by DEQ to operate until 2040. BART I is really a plan to invest \$500 million in the plant in order to run it until regulatory costs, administrative rules, court orders, or statutory changes shut it down. There is no reason to believe that 2040 has any relationship to the actual date of closure.

CUB agrees with Staff that PGE overstated short term carbon costs by projecting the enactment of cap-and-trade legislation. This position is understandable considering that when this IRP process first began with workshops, including one on Boardman, there was a widespread expectation that cap-and-trade had momentum and would pass. Today that looks unlikely – at least in the next couple of years. Not so clearly anticipated at the beginning of this process was the additional regulation of coal that is now occurred. When this IRP process began, CUB was unaware of the EPA MACT rulemaking process, and the EPA had not issued a Notice of Violation for Boardman. But today, Boardman also faces those pressures and additional pressure will likely come from EPA regulation of greenhouse gases, as well as increased regulatory costs on coal ash disposal and coal mining.

| Regulatory Costs Expected at Beginning of IRP | Regulatory Costs Expected Today |
|--|---|
| <ul style="list-style-type: none">• BART• Cap and Trade | <ul style="list-style-type: none">• BART• MACT• NOV• Fly Ash• Coal Mining• EPA greenhouse gas regulation |

Today, any future Boardman scenario must allow for the risk of significant additional regulatory costs. And, as the evidence of climate change increases, so too will these regulatory risks. While the above table shows the regulatory costs that can now be expected in the short term, in the long term there will likely be a great deal more regulatory risk, including that of cap and trade, and ultimately there will be state and federal limits on coal production. This is the reason that CUB does not believe that it is reasonable, or even possible, to forecast Boardman’s operation through 2040. The BART I proposal would require customers to invest \$500 million in Boardman, notwithstanding the significant risk that the plant could be forced to cease operating before 2040.

For the above reasons, CUB supports plans that will result in earlier closure of Boardman

on a reasonable timeline. These pressures listed above are also the reason why CUB does not believe that it is possible to predict an exact year of the plant's closure, whether with BART III or another option. BART III sets a deadline to close the plant in 2020, but whether Boardman operates until 2020 depends a great deal on both future regulatory and operational decisions. A major plant outage in 2018 might cost more to fix than the benefits of less than 2 years of continual operation. Regulatory requirements might also affect the plant's energy output results resulting in an earlier closure. CUB therefore believes that it is not possible to select an option with a concrete closure date, but that it should be possible to select a time frame that will result in closure not later than 2020.

B. BART III

CUB agrees with Staff that, of the options presented in the IRP, BART III is the best performer from a least cost/least risk basis. While it is similar to DEQ Option 2, BART III has less risk because it contains flexibility in the event that the DSI technology triggers other clean air violations.

The problem with DEQ's Option 2 is that the DSI technology may cause PGE to violate the new DEQ particulate rule. PGE's BART III solves that problem by essentially granting PGE the ability to use DSI, but not to the extent that it violates the particulate rule. As CUB said in its comments to DEQ:

CUB would like to see Boardman closed early with a plan that is affordable and allows PGE to achieve better replacement power emissions than a natural gas plant. In order for this to occur we need a plan that can be approved as a Least Cost/Least Risk option. Currently, there is only one proposal that meets this requirement and that is PGE's BART III.

However, the option also has to meet the Clean Air Act requirements and we are not experts on the Clean Air Act. PGE's proposal has a very specific off-ramp for the Dry Sorbent Injection (DSI) if DSI conflicts with particulate emissions. CUB agrees with PGE that such an off ramp is necessary, but does not have the expertise to say this is the only appropriate, affordable off-ramp. When two environmental standards come into conflict, logic would suggest that there is a choice of which standard to waive.¹

CUB is concerned that the proposed Commission acknowledgement might be too narrow:

PGE's IRP makes the case that if the proposed BART III compliance actions meet the Oregon Regional Haze Plan and Oregon Utility Mercury Rule standards, then this combination of pollution control investments and commitment to cease operations at Boardman in 2020 provides the best combination of expected costs and risks for ratepayers. We acknowledge

¹ CUB Comments to DEQ on BART rule, October 1, 2010, page 22.

PGE's proposed BART III compliance actions for the Boardman plant.²

Because the compliance actions in BART III relate to a very specific proposal for an off-ramp for the DSI technology, providing such a narrow acknowledgement may be problematic if EQC decides to provide a different off-ramp. When two environmental standards are in conflict, there is obviously more than one way to create flexibility. CUB is concerned that if EQC approves a rule that is substantially similar to BART III, but with a different off-ramp for the DSI technology, PGE will be left with a least cost/least risk option that has not been acknowledged. CUB would prefer not be involved in an IRP update proceeding that is comparing something substantially similar to BART III with DEQ Option 2, BART I and other Boardman options.

CUB recommends the following change to the Commission's acknowledgement:

If EQC adopts the BART III compliance actions or compliance actions that are substantially similar to BART III, then this combination of pollution control investments and commitment to cease operation at Boardman no later than 2020 provides the best combination of expected costs and risks for customers. We acknowledge compliance actions that are substantially similar to BART III for the Boardman plant.

C. Replacement Power for Boardman

Replacing Boardman with a new natural gas plant will reduce CO₂ emissions by 62% based on domestic conventional gas.³ Scientists tell us that by 2050 global carbon emissions need to be reduced by 80% from 2000 levels to reduce the risk of irreversible and harmful climate change.⁴ The reduction in emissions from switching from coal to natural gas is therefore not adequate to deal with climate change.

Ultimately, reducing carbon emissions by the level scientists say is necessary will require carbon regulation that significantly raises the cost of resources that contribute to carbon emissions, including natural gas combustion turbines. In order to reduce carbon emissions by 80% by 2050, there will have to be policies in place that will discourage the use of natural gas combustion turbines – at least as a baseload resource. For this reason, CUB believes that it is in the best interest of customers to explore low-carbon resources for replacing Boardman. CUB, along with PGE and environmental stakeholders, has been exploring a process to create low-carbon portfolios which could be considered in the next IRP.

CUB recommends that the Commission approve such a plan as a requirement of the next IRP. CUB suggests the Commission adopt the following language:

² LC 48, Draft Proposed Order, page 13.

³ WorldWatch Institute. "The Role of Natural Gas in a Low-Carbon Energy Economy." Christopher Flavin and Saya Kitasei, p 7.

⁴ IPCC, *Climate Change 2007: Synthesis Report* (Cambridge, U.K.: 2007). See also M.Meinshausen et al., "Greenhouse-gas Emission Targets for Limiting Global Warming to 2 deg C," *Nature* vol. 458 (2009), pp. 1158–624 WorldWatch Institute.

In the next planning cycle, PGE must develop with stakeholders a limited number of viable low-carbon IRP candidate resource portfolio options that meet the utility's resource needs while achieving specific CO₂ reduction targets.

III. Demand Response

CUB agrees with Staff's Draft Order that PGE's Demand Response programs have not been adequately analyzed. CUB is concerned that Staff's draft rule does not require Demand Response programs to be addressed for another two years.

A. Demand Response was promised with the introduction of smart meters

CUB expressed concern during 2007 and 2008 that PGE was rushing to invest in smart meters without first figuring out how to use them for Demand Response. CUB was worried at the time that the meters would be unable to communicate with smart appliances and would not provide the capabilities that were necessary for dynamic Demand Response programs. CUB argued that the Company should have had specific capabilities in mind for the smart meters before the meters were purchased.⁵ However, neither Staff nor the Commission was willing to slow the introduction of smart meters while Demand Response was investigated. Instead, customers were promised that the meters would work with Demand Response and that Demand Response programs would be up and running and reducing peak load by 2012. Now it looks like the 2012 IRP is where the serious analysis of Demand Response programs will take place.

During proceedings for UE 189, customers were told that the smart meters would enable Demand Response programs. PGE promised the following if smart meters were approved by the Commission in UE 189:

- By 2012, PGE would achieve annual savings of 23-25 MW from mass market direct load control (ie., from air conditioning, water and space heat)⁶
- By 2012 PGE would achieve 35 MW of firm curtailment from large customers and from critical peak pricing programs.⁷
- In the first quarter of 2010 PGE would issue an RFP for mass market load control for major residential appliances.⁸
- That the new meters would be able to communicate with smart appliances: "the two-way AMI communications system PGE is proposing can be used to send signals to customers' premises for

⁵ See CUB testimony in UE 189.

⁶ UE 189 Order No 08-245, Appedix A, pages page 3-4

⁷ *Ibid.*

⁸ UE 189 Order No 08-245, Appedix A, pages page 3-4

direct control of loads.”⁹

- PGE would explore enabling technologies such as communication thermostats as part of its Critical Peak Pricing Pilot.¹⁰
- By the end of 2009, PGE would develop an information tool that would use interval data to help customers understand the cost drivers of daily appliance usage.¹¹

In this IRP filing PGE is now projecting 10MW from firm curtailment from large customers, and no firm savings from critical peak pricing. For the mass market load control, PGE projects 1.5 MW in 2010 and 22.5 in 2015. We are halfway between the UE 189 order and 2012, and the Company has not made much progress towards significant demand response.

In addition, the promises of the smart meters are not being met. The first smart “appliances” will be coming this year in the form of smart electric vehicles.¹² However, PGE’s smart meters cannot communicate with the smart vehicles, which has led Staff to advocate that the PUC require additional meters for any customer who intends to charge their car with a voltage of 220V or greater.¹³

Today, PGE is discussing a scaled down version of its Critical Peak Pricing (CPP) pilot, with no enabling technology such as communicating thermostats, and no real-time usage information for customers. While PGE’s smart meters will transmit usage data to PGE every 15 minutes, customers have no ability to access that information. The pilot will allow for dynamic pricing for PGE, but dynamic usage information will not be available for customers. These customers will (hopefully) be able to go online and view the previous day’s usage information. This means that when PGE calls a Critical Peak Pricing event, the real time meter can supply PGE with the information it needs to bill the customers, but it cannot supply the customer with information that could help reduce usage until the next day, when the event is over. Rather than responding to the event by turning off appliances and turning down thermostats and being able to see what affect these actions are having, customers will have to wait a day to find out. A customer will know that their rates have increased by 400% to 600% during the critical peak event, but will have no way of knowing if they are cutting back 5%, 10% or 30% of their usage. During UE 189, CUB was told that “the two-way AMI communications systems that PGE is proposing can be used to send signals to customers’ premises for direct control of loads.”¹⁴ Today we are told that they cannot send even usage information to customers’ premises. CUB is not convinced that anything significant will be learned from a small voluntary pilot with no enabling technology and no real-time usage information flowing

⁹ UE 190/Staff/100/Schwartz/2

¹⁰ UE 189/Staff/100/Schwartz/2

¹¹ UE 189/PGE/103/ Carpenter – Tooman / 8

¹² “The vehicles already have the “smart” software anticipated in other appliances,” UM 1461 Staff Opening Comments, page12.

¹³ Ibid.

¹⁴ UE 190/Staff/100/Schwartz/2

to customers.

In UE 189, CUB expressed concern that without taking the time to think through what was desired in demand response, all customers were likely to get out of the smart meters was real time pricing proposals.¹⁵ Now, more than two years later, CUB continues to have those concerns. PGE's smart meters cannot communicate with smart vehicles, smart appliances or smart customers. The meters work on a proprietary network that can currently be used solely for billing purposes. CUB believes that the Commission should do more than just ask PGE to try again in two years. In two years we were supposed to be further down the path of developing demand response programs, not just beginning to evaluate programs.

In fact, CUB worries that a poorly-designed Critical Peak Pricing program will compete with other Demand Response planning for the Company's brainpower, and may ultimately do more harm than good. CUB suggests that the PUC order PGE to respond with a better plan to evaluate Demand Response programs in its IRP update. While the evaluation may not be completed that quickly, the Company and the Commission cannot keep kicking this can down the road. Rather than wait until the next IRP and hope that the analysis is complete, CUB wants to ensure that analysis that goes into the IRP is correct to begin with.

CUB recommends that the Commission require PGE to report in its next IRP update the specific steps it will be taking to evaluate demand response programs in the next IRP:

In its next IRP Update, PGE shall report and discuss the specific steps it will be taking to evaluate demand response programs in the next IRP.

IV. Wind Integration

CUB agrees with Staff that PGE's wind integration study, while presented to stakeholders, was not "vetted by regional stakeholders."¹⁶ There is clearly a difference between a PowerPoint presentation at a workshop and an official vetting by stakeholders. The analysis behind the study needs to be made available to stakeholders.

CUB has expressed concern in the past that wind integration studies have two uses. The first is for planning purposes in an IRP, where they can help us make choices between various resource options. The second is as an adder to the cost of wind power in the annual power cost proceeding. This second use gives the utility an incentive to inflate the cost of wind integration. This inflation could, unfortunately, cause the IRP to result in a less than optimal mix of resources.

CUB continues to be concerned that wind integration costs cannot be verified. It is not possible to look at last year's actual cost of wind integration as a starting point for next year's forecast.

¹⁵ UE 189/CUB/100/page 10-11

¹⁶ LC 48, Draft Proposed Order, page 12.

CUB supports the recommendation in the draft order:

In its next IRP Update and in the next IRP planning cycle, PGE must include a wind integration study that has been vetted by regional stakeholders.¹⁷

V. Conclusion

CUB generally supports the proposed order, but recommends the following changes.

A. Boardman

The Commission should not limit its acknowledgement to BART III, and should instead acknowledge enforcement actions that are substantially similar to BART III:

If EQC adopts the BART III compliance actions or compliance actions that are substantially similar to BART III, then this combination of pollution control investments and commitment to cease operation at Boardman no later than 2020 provides the best combination of expected costs and risks for customers. We acknowledge compliance actions that are substantially similar to BART III for the Boardman plant.

Replacing Boardman with a baseload natural gas plant may subject customers to significant risk from carbon regulation. The Commission should require that PGE work with stakeholders to develop low-carbon portfolios for the next IRP:

In the next planning cycle, PGE must develop with stakeholders a limited number of viable, low-carbon IRP candidate resource portfolio options that meet the utility's resource needs while achieving specific CO₂ reduction targets.

B. Demand Response

Customers were promised Demand Response programs by 2012 when smart meters were approved. Rather than wait two years to revisit the issue in the next IRP, CUB recommends the Commission adopt the following requirement for the IRP update:

¹⁷ LC 48 Draft Proposed Order, page 23.

In its next IRP Update, PGE shall report and discuss the specific steps it will be taking to evaluate demand response programs in the next IRP.

Respectfully Submitted,
October 29, 2010



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LC 48 – CERTIFICATE OF SERVICE

I hereby certify that, on this 29th day of October, 2010, I served the foregoing **COMMENTS OF THE CITIZENS' UTILITY BOARD OF OREGON ON STAFF'S DRAFT ORDER** in docket LC 48 upon each party listed in the LC 48 OPUC Service List by email and, where paper service is not waived, by U.S. mail, postage prepaid, and upon the Commission by email and by sending one original and one copy by U.S. mail, postage prepaid, to the Commission's Salem offices.

(W denotes waiver of paper service)

(C denotes service of Confidential material authorized)

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