

**BEFORE THE PUBLIC UTILITY COMMISSION  
OF OREGON**

UM 1234

In the Matter of	)	
	)	
PORTLAND GENERAL ELECTRIC	)	ORDER
COMPANY	)	
	)	
Application for Deferred Accounting of	)	
Excess Power Costs Due to Plant Outage.	)	

**DISPOSITION: DEFERRAL AUTHORIZED IN PART**

**I. PROCEDURAL BACKGROUND**

On November 18, 2005, Portland General Electric Company (PGE or the Company) filed, with the Public Utility Commission of Oregon (Commission), an application for deferred accounting (Application) of \$45 million dollars for excess power costs incurred from November 18, 2005 through February 5, 2006, due to what the Company called an “unexpected and extraordinary” outage at its Boardman generating plant (the Boardman Outage). The Application seeks deferral of the difference between the variable power costs for the Boardman plant, as established in the applicable resource valuation mechanism (RVM) proceedings<sup>1</sup>, and replacement power costs incurred during the 105-day Boardman Outage.

On February 28, 2006, a prehearing conference was held in Salem, Oregon for the above captioned docket. PGE filed direct testimony on April 14, 2006. Response testimony was filed on June 1, 2006, by Commission Staff (Staff), the Industrial Customers of Northwest Utilities (ICNU) and the Citizens’ Utility Board of Oregon (CUB). On July 17, 2006, PGE filed rebuttal testimony. A hearing was held on August 3, 2006, but parties agreed to waive cross-examination of all witnesses. Consequently, the hearing was administrative in nature only. Subsequent motions to admit testimony by PGE, Staff, ICNU and CUB were granted. On September 7, 2006, Staff and parties filed opening briefs. On September 21, 2006, Staff and parties filed reply briefs.

On July 21, 2006, PGE filed a motion requesting that the docket be designated as a major proceeding, and that oral argument be held. The motion was granted on July 24, 2006. Oral argument was held in Salem on October 3, 2006.

<sup>1</sup> PGE’s variable power costs for calendar year 2005 were set in Docket No. UE 161; PGE’s variable power costs for calendar year 2006 were set in Docket No. UE 172.

## II. FINDINGS OF FACT

On October 23, 2005, PGE's Boardman plant began a prolonged, forced outage. The Boardman Outage was caused by a performance problem with one of the facility's low-pressure turbines (LPT1). The LPT1 was designed and manufactured by Siemens Westinghouse Power Corporation, and installed in June of 2000. After installation of the LPT1, Boardman output increased by approximately 35 MW for the same energy input, thereby improving the efficiency output of the plant by approximately seven percent. LPT1 operated without serious problems through approximately the first half of its first ten-year interval for major maintenance. Plant engineers noticed vibrations occurring at one of the two bearings for the LPT1 in July 2005, however, and by October of that year, vibration levels were severe enough to warrant taking the unit off line. Inspection ultimately revealed a crack in the rotor for the LPT1, resulting in a need to remove the rotor, repair and reinstall it. As the repaired rotor was being placed into service, a generator rotor failed, causing a second outage on February 6, 2006. As the second outage is not at issue in the Application, PGE states that requested deferral period is limited to the time period beginning on November 18, 2005, and ending on February 5, 2006 (the Deferral Period).

Initially assessing the Boardman Outage to be short-term, PGE's power operations group replaced 375 MW of plant output with wholesale power purchases in day-ahead or real-time markets. When the Boardman Outage was determined to likely extend over multiple months, PGE evaluated replacement options, and concluded that forward wholesale power prices were below the generating cost of PGE's only power plant with available output during the months of December 2005 and January 2006. On November 18, 2005, PGE filed an Application requesting that the Commission authorize deferral of approximately \$45 million dollars in costs that were incurred to replace Boardman's output, between the date of the Application, and February 5, 2006, the date PGE deemed the Boardman Outage to be concluded. Replacement power expenses for the Deferral Period were recorded in Federal Energy Regulatory Commission (FERC) accounts 555 and 501 for Purchase Power and Fuel Expenses, respectively.

Boardman had been scheduled for a planned maintenance outage from April 29, 2006 through May 27, 2006. PGE performed the scheduled maintenance during the forced outage. As PGE had already purchased replacement power for the scheduled maintenance outage, PGE was able to resell that energy in the forward market, using the revenue from this sale to partially offset replacement energy costs during the forced outage period.

### III. DISCUSSION

#### A. Does PGE's Deferral Application Satisfy Legal and Discretionary Criteria?

##### 1. Positions

##### a. PGE

Under subsection 2(e) of ORS 757.259<sup>2</sup>, PGE seeks deferral of the Boardman Outage replacement cost expenses, rather than seeking an interim rate increase. PGE asserts that its Application satisfies both prongs of the statutory test as it would: 1) minimize the frequency or rate changes; and 2) match benefits received by ratepayers with costs borne by those same ratepayers. PGE asserts that an interim rate increase could have been supported based on PGE's poor financial results for the 2005 calendar year. (PGE's net income for 2005 was \$64 million, down from \$92 million in 2004, and PGE earned an estimated 6.3% return on equity (ROE). At the time of the Application, PGE projected even worse results for 2006.) PGE asserts that using deferred accounting instead of interim ratemaking is preferable due to the temporary nature of the Boardman Outage. PGE also argues that deferral of costs associated with the Boardman Outage will match the costs and benefits associated with the replacement energy better than other ratemaking approaches.

PGE also argues that the Application merits an exercise of Commission discretion to grant it. PGE explains that in exercising its discretion under the deferred accounting statute, the Commission considers the type of event that gives rise to the deferral application, and the magnitude of the harm resulting from the event. PGE asserts that the Boardman Outage is a scenario event, having not just a material financial impact on PGE's earnings, but a substantial impact.

In determining the nature of an event, PGE indicates that the Commission considers whether the event was: 1) included in test-year assumptions used to set rates; and 2) reasonably foreseeable as happening in the ordinary course of events. PGE points to the Commission's recent statement in Docket UM 1147, where deferred accounting principles were adopted:

The Commission will look to whether the event was modeled in rates, and, if so, whether extenuating circumstances were involved that were not foreseeable during the rate case or whether the event fell within a foreseen range of risk when rates were last set. If the event was not modeled, we will consider whether it was

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<sup>2</sup> Subsection 2(e) of ORS 757.259 permits the deferral of "identifiable utility expenses or revenues, the recovery or refund of which the commission finds should be deferred in order to minimize the frequency of rate changes or the fluctuation of rate levels or to match appropriately the costs borne by and benefits received by ratepayers."

foreseeable as happening in the normal course of events, or not likely to have been capable of forecast.<sup>3</sup>

Under the above criteria, PGE concludes that the Boardman Outage was neither modeled, nor could have been foreseen.

PGE explains that the Commission forecasts PGE's power costs for a given year using a rolling average of thermal plant availability for the four preceding years. PGE states that PGE's 2005 power costs rates were based on the following equivalent forced outage rates (EFOR) for Boardman for the years 2001 through 2004:

<u>Year</u>	<u>Modified EFOR</u>
2004	11.51%
2003	4.21%
2002	8.12%
2001	2.89%

As these forced outage percentages do not include outages as significant as the Boardman Outage, PGE concludes that the Boardman Outage was not modeled. PGE cautions that the Boardman Outage must be evaluated on an annual basis, as it began in 2005 but extended into 2006. PGE analogizes the Boardman Outage to the shutdown of its Trojan nuclear plant, and indicates that parties have agreed in the past that such extended plant outages are examples of scenario risks meriting deferral of the associated replacement power costs.

PGE deems the Boardman Outage to be unique in terms of its cause and duration, and therefore, unforeseeable. Indeed, PGE observes that the Boardman Outage could not have been reasonably forecast to begin in 2005, or at any time during the normal course of the plant's expected use. PGE calls the Boardman Outage a once in every 100 year event. Looking at national data recorded by the North American Electric Reliability Council (NERC), PGE asserts that a 105-day plant outage is extremely rare, as only 51 out of 21,415 outages over the past twenty years have lasted 105 days or longer, which is just 0.238% of all outages occurring nationally. PGE also observes that deferral of replacement power costs for the Boardman Outage is justified because the financial impact of the outage will not average out over time, should the Boardman Outage be excluded when forecasting future power cost rates.

PGE explains that the relevant question, with regard to characterizing an event as a stochastic or scenario risk, is not whether test-year forecasting makes assumptions about the type of event involved, but whether the pertinent test-year forecast assumed or predicted the particular event. Pointing to docket UM 1070, PGE asserts that the Commission denied PGE's application to defer costs associated with hydro conditions because the relevant forecasts assumed hydro conditions within the range of the conditions at issue. In comparison, PGE argues, the relevant forecasts for the Boardman Outage were based on

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<sup>3</sup> Order No. 05-1070, 7.

Boardman's availability over specific four-year periods that did not include any outage of a length even close to the Boardman Outage that is at issue now.

Regardless of how the Boardman Outage is characterized as an event, PGE asserts that its financial impact is large enough to warrant deferral of replacement power costs. PGE assesses the total excess power cost impact associated with the Boardman Outage to be \$59 million, representing a 355 basis points effect on ROE. PGE calculates the costs eligible for deferral to be \$45.7 million, representing a 273 basis points effect on ROE.

PGE also asserts that the ultimate financial harm to the Company is greater, due to the negative tax consequences associated with the excess power costs, as a result of Senate Bill (SB) 408. PGE contends that the impact of the Boardman Outage is made more significant by the recently passed legislation which modifies the way income taxes are recovered in rates. PGE asserts that for each dollar of excess power costs the Company incurs, customers will realize a tax benefit of 40%. PGE explains that the fixed ratio approach used under SB 480 captures the tax consequences of actual variances from test-year forecasts, without recognizing the variances themselves.

**b. Staff**

Staff concludes that the Boardman Outage satisfies legal and discretionary criteria. In Staff's assessment, deferral of certain Boardman Outage costs will appropriately match the costs that PGE incurred to provide power to customers with the benefits of that power. In response to ICNU, Staff indicates that a minor delay between the outage and the recovery by deferral of related costs is practically necessary due to the length of the deferral process.

Staff also agrees with PGE that the 105-day forced outage for the Boardman plant is an extraordinary event, and calls the level of financial impact on PGE significant. Staff concludes that the Boardman Outage is of a type, and magnitude, to warrant the Commission's exercise of its discretion to authorize the deferral of certain associated costs.

Contrary to PGE's position that the Boardman Outage is a scenario risk, Staff evaluates it as a stochastic risk, because the underlying event—a forced outage—is foreseeable, and the frequency of forced outages is quantifiable. Staff considers the financial impact of the Boardman Outage to be substantial, however, and therefore, great enough to warrant deferral. Although Staff recognizes that the Commission has not established fixed criterion to identify "substantial financial impact," Staff observes that the Commission has previously identified a financial impact of 250 basis points on ROE to be substantial. Staff assesses the Boardman Outage costs eligible for deferral to have a financial impact of approximately 255 basis points on PGE's ROE. Staff calls PGE's position, that the Boardman Outage is a scenario risk, irrelevant. Staff asserts that regardless of whether the Boardman Outage is identified as a stochastic or scenario risk, its financial impact is significant enough to merit deferral treatment.

**c. CUB**

CUB deems the Boardman Outage to be extraordinary, and acknowledges that deferral of associated costs will “technically” minimize rate changes, and will temporally allocate costs. CUB regards the Boardman Outage as difficult to classify as a stochastic or scenario risk, but concludes that it must be considered an “unusual” or “unique” event. Consequently, CUB deems it appropriate to treat the Boardman Outage as a scenario event. CUB also deems the financial impact of the Boardman Outage, estimated to be between 255 and 273 basis points on PGE’s ROE, to be significant enough to justify deferral. CUB also takes the position that the Boardman Outage is not an event that should be included in a four-year average of a utility’s forced plant outages, for the purposes of setting of future rates.

CUB supports PGE’s request to recover actual replacement power cost, rather than net system variable power cost, but with the caveat that this method of quantification should be used consistently to determine deferral amounts. CUB recalls that deferral costs associated with the outage of PacifiCorp’s Hunter plant were based on net system power cost variation. CUB expresses concern that the utilities should not be permitted to select the methodology that benefits the utilities most, resulting in the greatest amount of deferred monies. CUB asserts the net system variable power cost methodology used in a bad hydro year allows a utility to recoup costs not directly resulting from the deferral event, while use of the actual replacement power cost methodology in a good hydro year allows the utility to keep benefits associated with additional hydro production. For example, CUB explains that PGE’s proposed quantification method for determining the deferral amount associated with the Boardman Outage will not capture PGE’s use of additional hydro production to offset Boardman’s lost generation, or to make additional power sales in the market. CUB recommends that the Commission direct utilities to always use actual replacement power cost to determine a deferral amount.

**d. ICNU**

ICNU argues that PGE’s deferral request is neither legally authorized, nor worthy of the Commission’s exercise of discretion. Noting that the Commission has previously indicated that deferred accounts should be used sparingly, and recognizing that the deferral of excess power costs may upset the allocation of risk in ratemaking, ICNU urges the Commission to deny PGE’s Application. ICNU also accuses PGE of trying to “game” recovery of the Boardman Outage costs by combining deferred accounting with manipulation of forced outage rates.

ICNU asserts that the Commission’s distinction between stochastic and scenario events focuses on whether a risk is predictable and capable of being modeled in rates, rather than whether an event is “rare”. ICNU classifies the Boardman Outage as a stochastic risk, because forced outages are expected and forecast. ICNU explains that PGE establishes power costs based on assumptions about forced outages for all thermal generating plants, including Boardman. The forced outage rate recently used in PGE’s rate model uses a four-year rolling average of actual outage rates. Rates established in PGE’s 2005 and 2006 RVM proceedings assume a 6.5 percent outage rate, representing approximately 24 days of

outage on an annual basis. ICNU argues that PGE's multiple generating plants increase the odds of an extended forced outage. ICNU asserts that PGE fails to demonstrate that the length of the Boardman Outage justifies treating it differently from other forced outages.

Even if the duration of the Boardman Outage is considered rare, ICNU argues that PGE's 2005 and 2006 power costs included forced outage rates reflecting annual plant outages of equal or greater magnitude than the 2005 Boardman Outage. PGE responds, however, that ICNU relies on data representing annual forced outage rates, and not an event-by-event itemization of forced outages. PGE also observes that an outage of a coal plant, which typically operates below market prices, has greater financial impact than an outage of a gas plant, which usually operates nearer market prices.

ICNU also discounts data from NERC indicating that only 0.24 percent of all outages nationally recorded by NERC in the last twenty years lasted as long as the Boardman Outage. Observing that almost 90 percent of the outages recorded lasted only five days, ICNU argues that under PGE's construct, every outage lasting "longer than a couple of days would be treated as a scenario event."

ICNU argues that PGE's experience with multiple extended forced outages in the past thirty years belies the argument that the Boardman Outage was unforeseeable. ICNU points to an extended outage for Boardman when the plant first became operational in the early 1980s, followed by an extended outage and the eventual decommissioning of the Trojan plant in the 1990s, and then followed by a six-month outage for PacifiCorp's Hunter 1 plant in 2000. ICNU also points out that the Boardman plant experienced not one, but two extended outages in the last two years—the outage at issue in this proceeding, and a subsequent outage caused by failure of the same LPT1 turbine—for a total outage period of over 150 days. ICNU observes that a history of four extended outages for PGE thermal generating plants in a period of 26 years undermines PGE's assertion that an extended outage for a plant such as Boardman is not expected to occur in the lifetime of the plant.

ICNU also argues that plant outage variances from forecast do balance out, as PGE regularly experiences actual outage rates that are substantially less than the assumed outage rates in power costs, allowing PGE on occasion to collect more in rates than actual power costs. ICNU asserts that there is a distribution of actual outage rates ranges that are both higher and lower than the assumed outage rates upon which power costs are based.

Concluding that the Boardman Outage is a stochastic event, ICNU argues that the financial impact of the outage is insufficient to warrant deferral. ICNU asserts that the Commission's standard of whether an event has a substantial financial impact, if the event impacts the utility's earnings beyond a reasonable range, typically measured as 250 basis points on ROE. ICNU argues that Commission precedent establishes that "250 is an appropriate measure of the minimum financial impact necessary to allow deferral of a cost arising from a stochastic risk that already has been modeled in rates."<sup>4</sup>

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<sup>4</sup> ICNU Opening Brief, 10.

ICNU calculates that replacement power costs for the Boardman Outage total \$42.6 million, which translates to a 254 basis points impact on PGE's ROE. ICNU observes that this impact barely exceeds the 250 basis points deadband on ROE used to measure the substantiality of impact. In any case, PGE asserts that PGE's overall earnings, and factors affecting these earning, such as hydro conditions and gas and electric prices, must also be considered.

Indeed, ICNU argues that events other than the Boardman Outage significantly contributed to PGE's earnings in 2005 and 2006. ICNU points to increases in other expenses, the establishment of a \$10 million reserve for refunds of Multnomah County Business Income Taxes, and lower hydro output as significant negative impacts on PGE's 2005 earnings. ICNU testified that 2005 hydro conditions had a 149 basis points impact on PGE's 2005 earnings. Consequently, ICNU estimates that the Boardman Outage, on its own, has only a 210 basis points effect. ICNU also states that PGE's 2005 10-K indicated that the 11 percent increase in PGE's average variable power costs "was largely offset by both a reduction in total system load and a \$24 million decrease related to the amortization of costs deferred under [PCAs] in effect during 2001 and 2002."<sup>5</sup> ICNU concludes that a comprehensive analysis of PGE's 2005 earnings indicates that the impact of the Boardman Outage is not as significant as claimed by PGE. In any case, ICNU also alleges that PGE's claim that its 2005 earnings were less than 2004 is misleading, because there is evidence that PGE's \$64 million in net income in 2004 is roughly equivalent to the \$60 million and \$66 million that PGE earned in 2003 and 2002, respectively.

Finally, ICNU argues that the deferral of replacement power costs during the Boardman Outage will neither minimize the frequency of rate changes, nor match costs and benefits for ratepayers. If the financial impact of the Boardman Outage is barely substantial, it is not severe enough to warrant interim rate relief, ICNU argues. ICNU also observes that rates will be changing shortly anyhow, because PGE filed a rate case that seeks rate changes in the near future.

## 2. Resolution

As we have discussed in several past orders, we determine whether a deferral application should be granted with a two-stage review. During the first stage, we examine whether a deferral application is authorized by law, pursuant to ORS 757.259. To be authorized, the facts of a proposed deferral must indicate that the requested deferral will either minimize the frequency of rate changes, or appropriately match the costs borne by, and the benefits received by, ratepayers.

PGE initially took the position that if we decided not to grant the Application, we could still address the Boardman Outage costs by taking the Boardman Outage into account when setting future rates in UE 180.<sup>6</sup> We have already determined in UE 180 not to

<sup>5</sup> *Id* at 19, citing ICNU/102, Falkenberg/7.

<sup>6</sup> On March 15, 2006, PGE filed Advice No. 06-8, an application for a general rate increase, that was docketed as UE 180.

take the latter action, having removed the hours in the Deferral Period from the forced outage hours used to calculate a forced outage rate in that docket.<sup>7</sup> Having taken the Boardman Outage into account in forecasts for future rates would have indirectly affected rates for the next five years, while deferral of the Boardman Outage costs would directly impact rates for a much shorter period of time. We conclude that the proposed deferral better aligns benefits and costs and is, therefore, legally authorized. Under ORS 757.259, it is unnecessary to consider whether the proposed deferral would also minimize rate fluctuations.

We turn to the second stage of our deferral review to evaluate whether we should exercise our discretion to grant the requested deferral. In this stage, we must evaluate whether the Boardman Outage should be characterized as a stochastic or scenario event, and assess the event's financial impact on PGE. Although Staff suggests that we need not classify the Boardman Outage, we deem it important to do so. In Order No. 04-108, upheld by Order No. 04-357, we first explained that the exercise of our discretion involves our consideration of two interrelated factors: the type of event giving rise to the deferral, and the magnitude of the amount to be deferred. We also indicated that if a deferral application was based on an event deemed to be a stochastic risk, deferral was warranted only if the financial magnitude of the event was substantial, whereas deferral of a scenario event is appropriate if the financial effect of the event is material. A full and complete evaluation of PGE's deferral application requires that we consider both factors.

In Order No. 04-108, we explained that a stochastic risk can be predicted to occur as part of the normal course of events, whereas a scenario risk is not susceptible to prediction or quantification. In Order No. 05-1070, we further explained that we consider whether a deferral event was modeled in rates. If an event was modeled in rates, we evaluate whether the event was within a foreseen range of risk, or whether extenuating circumstances were involved that rendered the event unforeseeable. If the event was not modeled in rates, we assess whether it was otherwise foreseeable in the normal course of business.

As part of the ratemaking process, we model plant outages. We agree with PGE, however, that we must determine whether the Boardman Outage *itself* was foreseen, or was predictable within the forecast range of probability. In other words, as plant outages are modeled in rates, the question we must ask to determine if deferral is warranted for costs associated with the Boardman Outage is: Was the Boardman Outage within a foreseen range of risk?

In setting a utility's rates, this Commission takes into account a forced outage rate generally determined by the average availability of the utility's thermal plants for the preceding four years.<sup>8</sup> Here, the rates applicable to this request for a deferral were established, in part, using a forced outage rate determined in PGE's last general rate proceeding, Docket No. UE 115.<sup>9</sup> To determine the foreseeability of the Boardman Outage, we conclude it is appropriate to examine whether the scope of the event was within a

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<sup>7</sup> See Order No. 07-015 at 15.

<sup>8</sup> The Commission may decide to not include, or otherwise adjust for, extraordinary outages when determining the EFOR for a particular year.

<sup>9</sup> See Order No. 01-777.

reasonable range around this previously determined forced outage rate. In other words, we look to determine whether the event falls within a reasonable deviation range around the forced outage rate.

Utilizing this approach, we find that PGE's rates in effect during the requested deferral period did not take into account a plant outage as significant as the Boardman Outage. We find that the nature, and the 105-day duration of the Boardman Outage are unique, and that its occurrence is outside of the foreseen range of risk for forced outages. Indeed, in PGE's recently concluded rate proceeding, we held that the unique nature of the Boardman Outage warranted its removal from the inputs used to determine a forced outage rate.<sup>10</sup> Consequently, we deem the Boardman Outage to be a scenario risk.

This finding is consistent with our decision in Order No. 04-108. There, we distinguished between hydroelectric conditions that fell within a foreseeable range of hydro availability, and a plant outage that was far outside the range of forecasted risk for forced outage. In that order, we identified the serious outage of PGE's Trojan nuclear plant that was the subject of two deferral cases as a scenario risk. We stated:

In the Trojan deferral cases, UM 445 and UM 529, we were dealing with a paradigm or scenario risk. While rates are typically set using four year average forced outage rates to forecast NVPC, the duration and cost of the Trojan outages were not within the range considered when we set base energy rates. The Trojan shutdown was not a normal forced outage, and the risk of premature decommissioning was not reflected in base energy rates. By contrast, the 2003 hydro year at issue here is within the range considered in normalizing hydro availability.<sup>11</sup>

Although the Boardman Outage was not as severe as the Trojan outage, the Boardman Outage was significant and, like the Trojan outage, was clearly outside the range of outages considered when rates were established for 2005 and 2006. Again, we conclude that the Boardman Outage is properly classified as a scenario risk.

In Order No. 04-108, we indicated that deferred accounting treatment is appropriate for costs related to scenario risks, if the financial impact of the event is material. Staff and all parties agree that the financial impact of the Boardman Outage is at least a few points over 250 points on PGE's ROE. PGE, Staff and CUB also agree that a financial impact over 250 points on ROE is not only material, it is substantial. Consequently, we deem the Boardman Outage to have a material effect on PGE's financial condition, and conclude that the Boardman Outage satisfies deferral discretionary criteria.

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<sup>10</sup> See Docket No. UE 180, Order No. 07-015 at 15.

<sup>11</sup> Order No. 04-108 at 10.

**B. What Replacement Power Costs Are Eligible for Deferral?****1. Positions****a. PGE**

PGE identifies two categories of costs associated with the Boardman Outage: 1) Costs associated with energy purchases, valued either at market or contract price, to replace Boardman output. (PGE estimates Boardman output lost during the deferral period to be 383 MWh for 2005, and 380 MWh for 2006); and 2) Costs avoided due to the Boardman Outage, such as unused coal and transportation, and including the incremental costs of production, as established in the appropriate RVM forecasts.<sup>12</sup> The latter category of costs offsets the first. PGE assumes line losses of 1.9 percent for both categories.

The following simplified calculation explains calculation of the cost associated with a single hour of the Boardman Outage:

$$\text{Cost} = \text{Energy} * [(1+\text{Losses}) * (\text{Purchase Price}) - (1+\text{Losses}) * (\text{Avoided Cost})]$$

PGE originally calculated the total net cost of the Boardman Outage for the Deferral Period to be approximately \$45.4 million. PGE estimated that the financial impact of this amount would be a reduction in PGE's ROE by 270 basis points, not taking into income tax effects associated with implementation of Senate Bill 408.

**b. Staff**

Staff challenges PGE's calculation of costs for the Boardman Outage, finding two basic flaws with the calculation, and several minor errors. Staff recalculates the total net cost of the Boardman Outage during the Deferral Period to be approximately \$42.8 million, \$2.6 million less than originally requested by PGE.

Staff asserts that PGE's calculation is flawed because it overstates the amount of energy replaced, as PGE's calculation is based on the full capacity rating for the Boardman plant, instead of the plant's derated capacity. Staff explains that PGE already recovers a certain level of replacement power costs in rates, based on an assumed forced outage rate of 6.5 percent. Staff states that existing rates assume that the Boardman plant is available 93.5 percent of the time, providing 358 MW of generation in 2005, and 355.5 MW in 2006, as determined in prior RVM proceedings. Staff argues that these amounts should be used when calculating the Boardman Outage costs, not PGE's numbers which are based on the fully-rated capacity of Boardman.

Staff also criticizes PGE's calculation because it includes a line loss adder. Observing that PGE does not include such an adder in rate models, Staff finds the 1.9 percent adder on the calculation of replacement costs to be inconsistent and inappropriate.

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<sup>12</sup> Incremental costs are \$11.48 and \$12.44 per MWh for 2005 and 2006.

Staff also identifies minor errors in PGE's calculation, as follows: 1) PGE erred in calculating the daily on- and off-peak average price or quantity of pre-scheduled power purchases (typically by assigning an average price or quantity for each day, when daily prices or quantities were actually different) on November 11, 2005; November 13-14, 2005; November 20-21, 2005; and November 24-28, 2005; and 2) the cost for 1,200 MWh of prescheduled energy was inappropriately included as replacement power. In addition, Staff determined that PGE incorrectly calculated savings from avoided maintenance by: 1) using the rated capacity of the Boardman plant and the line loss adder; 2) included 800 MWh of forward market sales that do not appear to have occurred for April 29, 2006; and 3) using the Company's February 3, 2006, forward electricity price curves, instead of actual day-ahead index prices.

**c. ICNU**

ICNU agrees that PGE's calculation of replacement power costs is flawed because it assumes that the Boardman plant's full capacity of 383 MW was lost during the Boardman Outage. ICNU asserts that the rate model used to set rates for the years of 2005 and 2006 assumed that the Boardman plant's available output would be 358 MW. ICNU concludes that PGE's base rates cover the difference of 25 MW between Boardman's assumed availability and its full capacity. ICNU recalculates Boardman replacement costs to be \$42.6 million.

**d. CUB**

CUB agrees with Staff and ICNU's identification of calculation flaws by PGE. CUB concurs that PGE miscalculated outage costs by using a rated capacity for Boardman of 380 and 383 MW for 2005 and 2006 respectively, instead of the derated capacities of 358 MW and 355 MW that were used, respectively, to calculate PGE's power rates for 2005 and 2006. CUB accepts Staff's calculation that costs related to the Boardman Outage total \$42.8 million.

**e. PGE's Response**

PGE agrees with all of Staff's proposed modifications to the calculation of the Boardman Outage costs, resulting in a total of \$42.8 million, although PGE's agreement with one proposed modification is conditional. PGE agrees that replacement costs for the Boardman Outage should be calculated based on the reduced capacity rating for Boardman of 93.5 percent, but only if future forecasts, conducted in other proceedings, such as UE 180, do not assume that Boardman will be available at full capacity.

PGE asserts that the treatment of this deferral application is inextricably related to the method used to determine Boardman's availability for forecasts of future net variable power costs (NVPC). Since the 1980s, the Commission has used a rolling, four-year weighted average of actual forced outage rates to determine thermal availability for NVPC forecasts. PGE characterizes this methodology as not only an objective means to forecast an

unknowable number, but also as a risk allocation mechanism. PGE explains that better than forecast thermal plant operations will result in benefits to customers, while worse than expected operations will result in higher revenues for the utility. As an example, PGE notes that the Boardman plant performed particularly well in 2001, with an EFOR of 2.89 percent, with that figure being included in PGE's 2006 RVM as an input for the current 6.5 percent Boardman forced outage rate, or 93.5 percent availability factor.

PGE considered not requesting deferral of Boardman Outage costs. Instead, PGE argued that it could have relied on trying, in UE 180, to include the Boardman outage in the rolling, four-year average methodology to forecast future power rates. PGE considered this approach inferior to deferral, however, due to the following two reasons, among others: 1) as PGE did not originally know the duration of the outage, PGE could not determine the likely impact on future rates; and 2) PGE was concerned that basing future rates on the outage would result in rates that did not reflect actual costs.

When the duration of the outage was known, PGE considered it reasonable to take into account the Boardman Outage when forecasting future rates in UE 180. PGE observed that the outage's span over two calendar years mitigates the forecast effect. PGE originally asked the Commission to decide, in this docket, which regulatory tool to use to address the Boardman Outage.

## **2. Resolution**

Our role in this proceeding is threefold: 1) to evaluate whether PGE's deferral application should be granted, and if so: 2) to determine the amount that is eligible for deferral; and 3) to decide whether all eligible costs, or some subset, should be actually deferred. It is not within the scope of this proceeding to determine how future power costs are forecasts and rates set. In any case, we already decided, in UE 180, to remove the hours in the Deferral Period from forced outage hours used to calculate a forced outage rate in that docket.<sup>13</sup>

With this issue dispensed with, we find no disagreement among Staff and parties that there is a total of \$42.8 million in replacement power costs associated with the Boardman Outage, for the defined deferral period, that are eligible for deferral. We approve this amount.

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<sup>13</sup> See Order No. 07-015 at 15.

## C. What Eligible Replacement Power Costs Should Be Actually Deferred?

### 1. Positions

#### a. PGE

PGE argues that the Commission need not impose a deadband or other sharing mechanism if PGE's deferral request is granted. PGE asserts that the statutory authorization for deferrals does require the amount eligible for deferral to be shared, and points out that the Commission approves many deferrals without imposition of a sharing mechanism, including the deferrals of: PGE's anticipated 2005 Oregon state income tax kicker; pollution control tax credits; information technology costs; intervenor funding; and advertising. Indeed, PGE observes that the only deferred cost items that have ever been subject to sharing requirements are power costs. PGE asserts that regulatory policy should treat all deferrals the same.

PGE refutes the precedential value of the application of a deadband and a sharing mechanism in UM 995. PGE asserts that the Commission never intended its decision in that case to be the standard applied in other cases. Rather, PGE observes that the Commission recognized the situation—*i.e.*, the California energy crisis, near record drought, cold weather, and a catastrophic plant outage—to be extraordinary. PGE also points to numerous factual differences between the Boardman Outage and the situation in UM 995: 1) the UM 995 deferral period lasted almost 12 months, whereas the requested deferral period for Boardman is less than three months; 2) the UM 995 deferral was global in nature, taking into account all variations in power costs, whereas the requested deferral only addresses the outage of the Boardman plant; 3) a 250 basis points on ROE deadband in UM 995 allowed PacifiCorp to recover approximately 60 percent of excess power costs, whereas application of the same deadband to the Boardman Outage would disallow all but one percent of PGE's excess power costs.

PGE notes the severe consequences of applying a deadband or sharing mechanism. Although Staff and CUB both agree that the costs associated with the Boardman Outage should be deferred, PGE estimates that if any of the sharing mechanisms recommended by Staff and CUB are applied, PGE would recover only 0.74 to 5.46 percent (or less<sup>14</sup>) of the \$45.7 million that PGE asserts was incurred to provide service to customers during the outage. As Staff also recommends that the Boardman Outage be ignored for future forecasting purposes, PGE argues that the effect of Staff's position is to essentially disallow the deferral, as ICNU recommends.

If the Commission applies a regulatory device, such as a deadband or sharing mechanism, when determining the total amount of Boardman replacement costs to be deferred, PGE argues that it must consider the impact of SB 408 when doing so. PGE states

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<sup>14</sup> PGE indicates that CUB has publicly stated, since its testimony, that PGE should recover less than \$1 million. Thus, PGE's hypothesis that using Staff's recommended recovery of \$905,000, together with CUB's proposed sharing band of 70/30, PGE could recover only up to 1.4% of replacement power costs.

that the Commission indicated in Order No. 06-532, which adopted rules to implement SB 408, that it would consider the impact of SB 408 in other ratemaking proceedings. PGE asserts that the thresholds suggested by Staff, CUB and ICNU do not take into account tax implications to PGE of cost and revenue variances. As the calculation of taxes collected by a utility under SB 408 does not factor in variances from test-year forecasts, PGE explains that ratepayers realize a tax benefit of 40% on each dollar that PGE incurs in excess power costs. PGE argues that to compensate for this impact, the Commission must adjust any deadband or sharing mechanism that is applied, or increase the amount deferred by PGE's effective tax rate.

If the Commission does not authorize deferral of excess power costs related to the Boardman Outage, or implements one or more sharing mechanisms that effectively negate any recovery of Boardman Outage costs, PGE argues that the Commission must take into account the Boardman Outage when forecasting future rates. PGE prefers that the Commission use deferred accounting to allow PGE to recover prudently incurred replacement power costs, but argues that it is contradictory to deny deferred accounting for such costs on the basis that rates already take into account forced outages such as the Boardman Outage, yet not include that outage when modeling and forecasting future power costs.

PGE explains that since 1984, test-year forecasts in general rate cases of net variable power costs have assumed thermal generating plants would be available, based on a weighted, rolling average of availability for the preceding four years. As PGE filed a general rate case with a test year of 2005 (Docket No. UE 180), the inclusion of the Boardman Outage in plant availability statistics is at issue in that proceeding. PGE takes the position that for future forecasting purposes, the Boardman Outage should be excluded only if the Commission authorizes deferral of replacement power costs.

**b. Staff**

Although Staff concludes that \$42.8 million in Boardman Outage costs are eligible for deferral, Staff argues that only a small portion of these costs should actually be deferred. Staff recommends that the Commission impose sharing mechanisms that would divide responsibility for the outage costs between ratepayers and shareholders. The sharing mechanisms recommended by Staff would:

1. Require shareholders to absorb 100 percent of the excess power costs in a deadband equivalent to 250 of ROE;
2. Shareholders absorb 50 percent of the excess power costs in a sharing band between 250 and 400 of ROE; and
3. Shareholders absorb 10 percent of the excess power costs beyond 400 ROE.

Staff asserts that these sharing mechanisms are consistent with Commission precedent since 2001 for power cost deferrals. Staff observes that the Commission first

imposed such sharing mechanisms for deferred power costs in Docket UM 995. In that case, Staff asserted that the following three principles justified the application of a sharing mechanism to deferred costs:

1. Utilities typically bear the risks and rewards of revenue and cost changes between rate cases, and should be protected only to the extent that cost changes are truly extraordinary;
2. Risks should not be completely shifted from the utility to its customers. It is appropriate to share even the risks of extraordinary cost changes;
3. The utility should receive incentives to minimize costs.

In Docket UM 995, Staff also argued that sharing mechanisms allow extraordinary costs to be shared with ratepayers, while capturing the “normal business risk” that a utility is generally exposed to between rate cases.

Staff agrees with PGE that any sharing mechanism applied to Boardman Outage costs could be adjusted to account for the effects of implementation of SB 408. To address the effects described by PGE, Staff suggests that the Commission adjust the deadband in Staff’s proposed sharing mechanism by the tax effects for 2006, when the SB 408 automatic adjustment clause takes effect.

**c. CUB**

CUB also recommends that appropriate sharing mechanisms be implemented, observing that PGE fails to convincingly argue why such mechanisms should not be applied. CUB points to several other instances where a deadband of 250 basis points has been instituted, and various sharing bands applied (*e.g.*, 50/50 sharing band for power cost variances between 250 and 400, and a 75/25, 80/20 or 90/10 band for costs above 400.<sup>15</sup> For deferral of Boardman Outage related costs, CUB recommends that the Commission institute a 250 basis points on ROE deadband, with a sharing band of 70/30 applied to all costs outside the deadband. Using Staff’s corrected excess costs of \$42.8 million, application of CUB’s proposed band would result in PGE customers absorbing up to \$655,000 of such costs. CUB also takes the position that the Boardman Outage is a catastrophic plant failure that should not be included in a utility’s four-year average.

CUB acknowledges that rules adopted in AR 499, pursuant to SB 408, may have consequences on any mechanisms applied to a deferral. CUB asserts that its testimony in UE 180 is relevant here. In UE 180, CUB stated, with regard to the interplay of SB 408 and sharing mechanisms, the following:

We recognize that the application of Senate Bill 408 may create a reason to reevaluate the appropriate magnitude of a

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<sup>15</sup> CUB/100, Jenks/8, referencing Docket Nos. UM 995, UM 1008/UM 1009, UM 1007 and UE 165.

deadband and sharing bands. In the past, a deadband and sharing bands were pre-tax values, and the utility then got a tax deduction, which reduced the impact of these bands. With the implementation of SB 408, these tax deductions will most likely be incorporated in the SB 408 automatic adjustment clause, and so no longer act to mitigate the amounts in a deadband and sharing bands. As the rules implementing SB 408 are not yet finalized, and as SB 408 is likely to face both a tough legislative session as well as legal challenges, we have designed a mechanism without taking into account SB 408. Once SB 408 is fully implemented, the Commission may wish to revisit a deadband or sharing bands such that the impact on the utility and the customers remain the same. CUB does not oppose redrawing the deadband and sharing bands so that post-SB 408 bands have the same after-tax impact as pre-SB 408 bands. CUB Opening Brief at 9, citing UE 180 CUB/200/Jenks/23.

CUB supports adjustment of proposed sharing mechanisms to account for SB 408 implications.

**d. ICNU**

Although ICNU's primary position is that PGE's deferral application should not be granted, ICNU argues if the Commission grants PGE's deferral application, the Commission should apply a 250 basis points on ROE deadband and a 50/50 sharing band. ICNU asserts that a 250 basis points on ROE deadband reflects the level of power cost variability risk that a utility assumes between rate cases, as the Commission has imposed in prior rate cases,<sup>16</sup> while the 50/50 sharing band represents a fair allocation of the additional risk, consistent with prior Commission decisions.<sup>17</sup> ICNU adds that the deadband and sharing band should be applied, regardless of whether the Commission deems the Boardman Outage to be a stochastic or scenario risk. ICNU observes that in UM 995, the Commission applied the same devices to the deferral of costs associated with a scenario event.

Although ICNU points to the UM 995 case as an example of the Commission's application of a 250 basis points on ROE deadband and additional sharing bands to a deferral, ICNU argues that application of these regulatory devices were not based on the specific circumstances of that docket. ICNU asserts that the Commission simply adjusted the outermost band of the sharing band to reflect the circumstances of that case. Thus, ICNU argues that the Commission should apply the 250 basis points deadband now if it grants PGE's deferral application, and although ICNU proposes a 50/50 sharing band,

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<sup>16</sup> ICNU refers to Order No. 01-420 at 5, 28; Order No. 01-231, Appendix A, at 4; Order No. 01-307, Attachment A, at 1; and Order No. 04-108 at 9.

<sup>17</sup> ICNU refers to Order No. 01-420 at 28-29.

ICNU acknowledges that the Commission should tailor the sharing mechanism to the circumstances of the deferral.

ICNU disputes PGE's contention that the Boardman Outage is analogous in any way to the Trojan shutdown. ICNU asserts that a shutdown and decommissioning of a nuclear facility is far different than a temporary outage at a coal plant. In any case, ICNU observes that deferrals associated with the Trojan plant were authorized fifteen years ago, before the Commission significantly elaborated on its deferred accounting policy.

ICNU also opposes adjusting the amount to be deferred in any way to account for SB 408. Although ICNU acknowledges that the Commission observed that it would take into account the tax effects associated with SB 408 when considering issues such as power cost adjustment mechanisms, ICNU argues that a power cost deferral is far different. ICNU also asserts that the Commission determined in Order No. 06-532 that it would be contrary to the legislature's intent to adopt an earnings test, or deferred account, that would effectively offset the SB 408 automatic adjustment clause. ICNU believes that adjusting the Boardman Outage deferral would indirectly accomplish this result.

## **2. Resolution**

The variability of power costs is expected, such that we anticipate some divergence between actual and forecast costs. Ratemaking has been traditionally designed with the understanding that utilities are responsible for absorbing such power cost changes between rate proceedings.<sup>18</sup> To the extent that the variance between forecast and actual power costs is extraordinary, however, we have several regulatory tools available, including deferral, to address such costs. When using regulatory tools such as a deferral, however, we must determine when excess power costs—i.e., actual costs above forecast—are truly extraordinary. We must also decide how to allocate responsibility for costs that are eligible for deferral between a utility's shareholders and its ratepayers, in order to ensure that ratepayers are responsible only for extraordinary costs and that utilities receive incentives to minimize costs. Having already determined that at least some costs associated with the Boardman Outage are extraordinary and eligible for deferral, we turn to the latter decisions.

In this proceeding, Staff, CUB and ICNU argue that regardless of the nature of the Boardman Outage—whether stochastic or scenario—there is a normal range of business risk associated with power cost variances that PGE must absorb before any costs are deferred. They contend that the measure of this normal band of risk is a 250 basis points deadband on ROE, as the Commission has applied in past cases, such as UM 995. However, PGE responds, and we agree, that employing the 250 basis points deadband on ROE to a scenario event such as the Boardman Outage would be a new application of the deadband.

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<sup>18</sup> Our discussion of PGE's power costs risks reflect risks associated with ratemaking in effect when PGE filed the Boardman deferral application, prior to implementation of a Power Cost Adjustment Mechanism (PCAM) pursuant to Order No. 07-015. We expect that the PCAM will significantly alter future power cost risks and rewards for PGE, and will change how they are addressed, eliminating the need for power cost deferrals.

The 250 basis points deadband on ROE originated in UM 1008/UM 1009, and was again applied in UM 995 as a sharing mechanism to allow PacifiCorp to recover power cost changes deemed extraordinary. In Order No. 04-108, entered in UM 1071, we articulated the distinction between stochastic and scenario risks, and explained that a 250 basis points deadband on ROE was also useful as a measuring stick to determine whether the financial impact of a stochastic event is substantial enough to warrant deferral in the first place. In Order No. 07-015, entered in UE 180, we applied an adjusted 150 basis points on ROE deadband<sup>19</sup> as an explicit measure of normal business risk.

We must decide whether it is appropriate to apply a measure of normal business risk to a scenario risk such as the Boardman Outage. If so, then we must decide what the appropriate measure is. As we discussed above, we consider the Boardman Outage to be a scenario risk because we find the scope of the Boardman Outage to be outside of the range of foreseeable forced outages. This method of identifying a scenario risk differs significantly from an alternative method, whereby we classify an event as a scenario risk because we find that it was not susceptible, in the first place, to prediction or quantification. The fundamental distinction between these two classifications of scenario risk is the relevance of the concept of normal risk. In the first method, there is a range of normal risk that must be deviated from before an event will be considered a scenario risk; in the second, there is no range of risk to evaluate.

If an event is deemed a scenario risk because it is outside a range of normal risk, we find that it is appropriate to apply a measure of normal risk when allocating, for deferral purposes, the costs associated with the event. We recognize, however, that the proposed 250 basis points deadband on ROE may not be the appropriate measure of normal risk to be applied in such a case. Rather, we find that the measure of normal risk applied to a scenario event should be contextual, reflecting the pertinent range of risk, and considering whether the scenario event is isolated, or combined with another scenario event or other extenuating circumstances.

For the Boardman Outage, we find the appropriate measure of normal risk to be the range of foreseeability we earlier defined as a reasonable deviation range around the pertinent forced outage rate. We find that PGE should not be allowed to defer costs that would likely be associated with an outage within this range of normal risk. However, as parties did not present evidence in this proceeding that would allow us to explicitly calculate this level of costs, we find it appropriate to approximate the financial impact of this range of risk. We determine that a 100 basis point deadband on ROE should be applied to costs eligible for deferral. Consistent with our pledge in Order No. 06-532, we further find that the ROE deadband should be adjusted from 100 to 80 basis points to account for the SB 408 effect on costs incurred on or after January 1, 2006, for the Boardman Outage.

We also agree with Staff and intervenors that a utility should be given appropriate incentives to minimize costs incurred during any event that may be the subject of a deferral application. Consequently, after the 80 basis points deadband on ROE is applied,

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<sup>19</sup> The size of the deadband reflects adjustment for SB 408 effects.

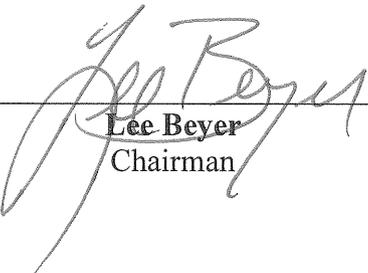
PGE should be allowed to defer 90 percent of the deadband-adjusted replacement costs eligible for deferral. Requiring a utility to absorb 10 percent of the deadband-adjusted replacement costs provides an incentive to the utility to minimize the duration of, and costs associated with, future plant outages.

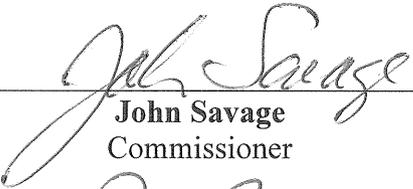
**ORDER**

IT IS ORDERED THAT:

- 1. Portland General Electric Company's request to defer costs associated with the outage of its Boardman plant, from November 18, 2006 to February 5, 2006, pursuant to ORS 757.259(2)(e), is granted.
- 2. Pursuant to the terms of this Order, we authorize Portland General Electric Company to defer \$ 26.439 million.
- 3. Ratemaking treatment to amortize these costs is deferred for a ratemaking proceeding.

Made, entered, and effective           FEB 12 2007          .

  
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**Lee Beyer**  
 Chairman

  
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**John Savage**  
 Commissioner

  
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**Ray Baum**  
 Commissioner



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.