BEFORE THE PUBLIC UTILITY COMMISSION

OF OREGON

UE 196

In the Matter of	)
PORTLAND GENERAL ELECTIC,	)
Application to Amortize the Boardman Deferral.	)

RESPONSE TESTIMONY

OF THE

CITIZENS' UTILITY BOARD OF OREGON

Redacted

March 6, 2009

BEFORE THE PUBLIC UTILITY COMMISSION

OF OREGON

UE 196

In the Matter of PORTLAND GENEREL ELECTRIC, Application to Amortize the Boardman Deferral.	)	RESPONSE TESTIMONY OF THE CITIZENS' UTILITY BOARD OF OREGON FILED WITH REGARD TO THE BENCH REQUEST

My name is Gordon Feighner. I am a Utility Analyst for the Citizens' Utility Board. My qualifications are listed in CUB Exhibit 301.

I. Introduction

In CUB's Reply Testimony of February 20, 2008, we concluded that "PGE purchased untested, experimental technology for Boardman, yet failed to conduct significant analysis of the risks that were being incurred. PGE then failed to follow through on its plans to mitigate those risks that the Company had identified in its meager analysis." After further discovery and review, CUB's prior conclusion stands. That PGE was well aware that it was purchasing experimental technology is well documented in CUB's Reply Testimony, is further documented in CUB's Surrebuttal Testimony. That PGE has no (or cannot produce any) internal Company analysis of the technology of the experimental equipment is demonstrated in this Response to the Bench Request. That PGE was aware of the significance of the risk of a forced outage is documented in CUB's

Reply Testimony. PGE accepted the increased risk of replacement power costs for a forced outage when the Company chose to install, without any reasonable due diligence, experimental technology at one of its major generating facilities. As evidenced by the existence of this docket, however, PGE considers the realization of that risk, and the associated replacement power costs, to be customers' responsibility. Where PGE's less than adequate analysis leads to serious and expensive consequences, customers should not be required to bail the Company out.

Begin Confidential Material

This testimony serves to reiterate CUB's reservations about PGE's contract with Siemens for turbine installation and maintenance at the Boardman coal plant. This contract exposed PGE and its customers to significant risks in terms of both maintenance and replacement power costs. First, PGE chose to install experimental technology at its Boardman plant without any significant internal analysis of that technology.[1] Second, the company's limited risk assessments identified overall [redacted]. Instead, the company signed a contract with Siemens that [redacted].[3]

End Confidential Material

[1] CUB/200/Brown/6-9.
[2] CUB Exhibit 106 at 3.
[3] ICNU/103/Martin/15. PGE & Siemens Westinghouse 1999 Contract, Part V, Section 2.

As stated in CUB's Surrebuttal Testimony, PGE's contract lacked a provision for reimbursement in the event of a forced outage after the first year of operation. CUB reiterates that PGE offered no evidence that the risk of a forced outage decreased significantly after the first year of operation, or that its contract successfully mitigated that risk [4]

Having read PGE's response to the Bench Request, CUB continues to believe that PGE has failed – and continues to fail – to demonstrate that it prudently managed the risks associated with the experimental technology installed in the Boardman plant.

II. Response to PGE's Bench Request Filing

PGE's response to the Bench Request offers little new reliable evidence to support a claim that the company operated in a prudent manner. Rather than respond to each item in the Bench Request, we will respond to three central questions posed in the Bench Request and PGE's response to those three questions.

- PGE tries to recast itself as an active manager/supervisor of the work of its contractors.
- PGE conducted a survey which the company claims supports its notion that its actions follow current standard industry practices.
- PGE continues to dismiss the technical advice of the independent experts it has hired regarding how the plant should be maintained.

[4] CUB/200/Brown/9-10.

A. Was PGE an active manager?

PGE claims that the Bench Request "overstates" its reliance on Siemens.[5] Of course, the Bench Request was based on the record that has been compiled over the last several months. As CUB demonstrated in its Surrebuttal testimony, PGE relied exclusively on information from the manufacturer when making the most important decision involving this experimental rotor – whether to purchase and install it in the first place. The company was unable to produce any evidence to show that it conducted its own technical analysis of then proposed turbine upgrade.[6]

PGE again failed to produce evidence that the company performed significant due diligence independent of Siemens before installing the turbine. This lack of independent due diligence prior to installation must have greatly hampered PGE's ability to provide oversight during installation and maintenance, as PGE had no independent expert advice to assist it in determining what errors and omissions for which to monitor. Thus, even though CUB is willing to accept PGE's claims that its personnel were on-site 24 hours a day observing and recording Siemens activities, it is nevertheless unclear what oversight PGE was in fact able to provide, as PGE had no technical analysis of the upgrade outside of what Siemens provided.[7] It seems to CUB that there should be more to quality control than "observing and recording".[8]

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[5] PGE/500/Quennoz/2
[6] UE196/CUB/Brown/10-12
[7] ibid
[8] UE 196 / PGE Exhibit / 500 / Quennoz / 2

B. The validity of the FOMIS survey is questionable.

PGE conducted a survey of other plant operators about their maintenance practices. While PGE draws the conclusion that this survey proves it was following standard operating procedure, CUB believes that it does not offer any such proof.

PGE surveyed 77 utilities and received responses from 13. PGE believes that this limited response provides conclusive evidence of current standard industry practices, but CUB notes that no information is provided about the practices of the other 80% of the utilities surveyed. Furthermore, the limited number of responses to the survey precludes it from being either a representative sample of PGE's peer companies or a statistically significant sample of North American electric utilities. Utilities in FOMIS are colleagues. Considering the context of PGE survey (PGE is undergoing a prudence review relating to how they installed and maintained a turbine upgrade), utilities that did not rely on the OEM may have declined to participate.

PGE claims that of "the thirteen responding utilities, twelve reported that they used the OEM for steam turbine <u>installation</u>"[9]. PGE even underlines the word "installation" to make sure that we understood that 12 utilities were stating that they used the OEM for steam turbine installation. The only problem is that PGE did not ask the utilities whether they used the OEM to install the turbine. PGE asked a compound question with an "or:"

> Did you have the original equipment manufacturer (OEM) install or verify proper installation of the steam turbines during original installation?

PGE/Quennoz/501a/1.

[9] UE 196/PGE/500/Quennoz/5

Twelve utilities did not report that they used the OEM for installation. Instead, twelve utilities reported that they used the OEM for installation **or** to verify proper installation, with no distinction drawn between these two very different practices.

Finally, we note that this is a proceeding to determine whether PGE was prudent in both its decision to install an experimental rotor design and its ongoing maintenance practices, either of which may have contributed to the catastrophic outage. Such a determination must be based on what the company knew when it made the decision to install the rotor and when it made its decisions relating to maintenance. Even if a representative sample had been gathered, the practices of other utilities in 2008-9 have no relevance when reviewing the practices of PGE prior to the installation of the upgraded turbines in 2000 or its maintenance practices from 2000 through at least 2007.

C. PGE's Exhibit 517C demonstrates that the company has dismissed the technical advice of third-party independent experts regarding plant maintenance.

BEGIN CONFIDENTIAL MATERIAL

PGE's Exhibit 517C is a report on vibration measurements of the Boardman Plant LP turbines, prepared by Sensoplan, Inc. This report was authored in October 2006 as part of the investigation of the causes of the 2005-06 forced outage, and offers a detailed level of analysis in terms of measurements of equipment vibration and performance. The report consists of 33 pages of analysis and another 67 pages of data appendices and contains several recommendations for further investigation and measurement that Sensoplan believed were necessary, including:

[redacted]

[redacted]

END CONFIDENTIAL MATERIAL

CUB Exhibit 302c (PGE's response to CUB's data request 23) indicates that the company's engineering staff has chosen not to implement most of these recommendations. While it is beyond the expertise of any member of CUB's staff to assess the validity of these particular actions on an engineering basis, we are troubled by PGE's simple one-page dismissal of these recommendations compared to the level of technical detail in Sensoplan's analysis. Considering the recent performance of the plant and the cost of significant plant outages, we would expect PGE to take recommendations from its expert consultants seriously; to the degree PGE was dismissing those recommendations, we would expect the utility to have a sound analysis to support its reasons not to adopt those recommendations. CUB realizes that this report is an *ex post facto* analysis of the vibrations that caused the unplanned outage; however, we must wonder if this case is indicative of a general policy of the company's engineering staff to

[10] UE 196 / PGE Revised Exhibit 517C / Quennoz / 19.
[11] *Id.* 25.
[12] *Id.* 25.
[13] *Id.* 30.
[14] *Id.* 31.

dismiss the recommendations of third-party engineering consultants that the company has hired to perform analysis, unless those consultants work for the OEM.

III. Conclusion

While a laudable sentiment, PGE's statement that "We would have been reluctant to contract out either the installation or maintenance of this advanced technology to vendors who did not have the design or field experience of an OEM with a worldwide fleet of similar turbines" sums up the issues CUB has with this case. PGE contracted out for experimental technology, there was no OEM – including Siemens – who had any experience with this new turbine design and there was no "worldwide fleet of similar turbines" because PGE bought the first two manufactured. PGE failed to do its pre-purchase due diligence to determine what it was buying and whether it would work.

Thus, PGE's response to the Bench Request does little to demonstrate that the company has operated prudently with regards to its decision to install experimental technology or with regards to its installation and maintenance practices thereafter. PGE's response to the Sensoplan analysis raises additional questions concerning whether the company continues to ignore potential performance problems at the Boardman plant, even in the wake of the catastrophic outage that is the basis of this docket.

WITNESS QUALIFICATION STATEMENT

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EXPERIENCE: Between 2004 and 2008, I worked for the US Environmental Protection Agency and the City of Portland Bureau of Environmental Services, conducting economic and environmental analyses on a number of projects. In January 2009 I joined the Citizens' Utility Board of Oregon as a Utility Analyst and began conducting research and analysis on behalf of CUB.

UE 196

Confidential and Subject to Protective Order No. 07-433

CUB's Data Request No. 23
PGE's Response to CUB's Data Request No. 23

UE 196 – CERTIFICATE OF SERVICE

I hereby certify that, on this 6th day of March 2009, I served the foregoing RESPONSE TESTIMONY OF THE CITIZENS' UTILITY BOARD OF OREGON FILED WITH REGARD TO THE BENCH REQUEST upon all parties of record in docket UE 196, as listed in the PUC Service List, by email and, where paper service is not waived, by U.S. mail, postage prepaid, and upon the Commission by hand delivery to the Commission's Salem offices.

(W) denotes waiver of paper service
(C) denotes service of confidential material authorized

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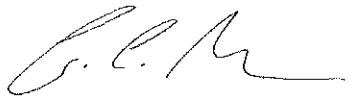
Respectfully submitted,



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