

**BEFORE THE PUBLIC UTILITY COMMISSION
OF OREGON**

UM 1182

In the Matter of

PUBLIC UTILITY COMMISSION OF
OREGON,Investigation Regarding Competitive Bidding

ORDER

DISPOSITION: PRELIMINARY DETERMINATIONS MADE; ABBREVIATED
SCHEDULE SET TO CONCLUDE DOCKET

I. SUMMARY

In this order, we conclude our examination of 4 of the 12 potential risk items identified for comparing the acquisition of a utility-owned resource to purchasing power from an independent power producer (IPP). We adopt changes to address two of those risk items. First, we direct the independent evaluator (IE) to provide a more comprehensive accounting of the risks and benefits to ratepayers for construction costs of utility-owned resources. Second, we require utilities to use a qualified and independent third-party expert to review the expected wind capacity factor for all projects on the short list. We also establish an abbreviated schedule to address the remaining eight potential risk factors identified in this proceeding.

II. INTRODUCTION

A. Procedural Background

Over the past several years, we have examined the potential bias in the utility resource procurement process that favors utility ownership of generation assets over power purchase agreements (PPAs) with third parties. In docket UM 1276, we accepted the premise that a bias exists due to the nature of ratemaking, which provides a utility the opportunity to earn return on plant investments but not on PPAs. Despite a lengthy investigation in that docket, however, we learned little of the scope and impact of the bias:

We have identified its existence, but are not able to quantify its significance. We do not know whether the current regulatory process has, in fact, failed to prevent the utilities from acquiring higher cost, utility-owned resources. Due to this uncertainty, we are unable to determine whether any of the proposals in this docket would mitigate the bias without improperly rewarding the utilities and unfairly harming customers.¹

Although we declined to adopt any proposals in docket UM 1276 that would have addressed the bias by providing utilities with monetary incentives to enter into PPAs, we reopened this docket to examine the bias in the context of our competitive bidding guidelines. We ordered an examination of the competitive bidding process to develop a more comprehensive accounting and comparison of all risk related to the potential utility self-bid bias when utilities issue a request for proposal (RFP). Specifically, we invited parties to comment on the analytic framework and methodologies that the IE could use under Guideline 10(d) to evaluate and compare the unique risks and advantages of utility benchmark resources as compared to purchasing power from IPPs.

In this reopened investigation, parties identified 12 potential comparative risk items for both utility benchmark resources and PPAs:

- Construction Cost Over-Runs
- Heat Rate Degradation
- Wind Capacity Factor Error
- Counterparty Risk
- Changes in Forced Outage Rates
- End Effect
- Environmental Regulatory Risk
- Increases in Fixed O&M Costs
- Capital Additions
- Changes in Allowed Return on Equity
- Verify Output, Heat Rate and Power Curve
- Construction Delays

In this phase of the proceeding, we asked parties to initially address four of those items: (1) Construction Cost Over-Runs; (2) Heat Rate Degradation; (3) Wind Capacity Factor Error; and (4) Counterparty Risk. Testimony on these risk factors was submitted by the Northwest & Intermountain Power Producers Coalition (NIPPC), PacifiCorp, dba Pacific Power, Portland General Electric Company (PGE), Idaho Power Company, the Citizens' Utility Board (CUB), and Commission Staff.

B. Preliminary Matters

Before we address the parties' recommendations, we must address some procedural matters. First, all parties who submitted pre-filed testimony and exhibits filed motions to introduce that evidence into the record. Those motions are granted.

¹ *In the Matter of an Investigation to Address Potential Build-vs.-Buy Bias*, Order No. 11-001 at 5 (Jan 3, 2011).

Second, NIPPC filed a motion asking that we take official notice of two documents:

- *Report of the Independent Evaluator, Accion Group, Portland General Electric Company's 2012 Capacity and Energy Power Supply Resources RFP*, Docket No. UM 1535 (Jan. 30, 2013).
- Direct Testimony of PGE witnesses Mike Niman and Terri Peschka, Exhibit 400, Docket No. UE 262 (Feb. 15, 2013).

NIPPC contends these documents are subject to official notice under OAR 860-001-460(1)(d) because they were made a part of the Commission's files in the regular course of business.

PGE does not object to NIPPC's request for official notice of testimony filed in docket UE 262. The company does, however, oppose NIPPC's motion with respect to the IE's Final Report. PGE contends that the request raises issues of fairness because it seeks to introduce new facts and arguments in the final round of briefing. In the alternative, PGE asks the Commission to consider its response and rebuttal to the IE Final Report provided in its opposition to NIPPC's motion.

NIPPC's motion for official notice is granted. PGE's response and rebuttal to the IE Final Report has been considered as provided in OAR 860-001-0460(2).

III. RISK ITEMS

A. Overview

To improve the fairness of the RFP process, NIPPC proposes that we adopt pre-determined, quantitative generic bid adjustments to proposed utility-owned resources. NIPPC contends that the use of bid adders will help level the playing field for all bidders by ensuring that utility self-build bids properly account for cost and performance contingencies that IPP bidders must incorporate into their bids. Under NIPPC's recommendation, the IE would be required to include bid adders to address the risk of construction cost over-runs, heat rate degradation, and lower wind capacity factors. These adders would be included in the price evaluation of any bid that would result in utility ownership of the plant, unless the utility can prove that its self-build bid properly mitigates the risk addressed by the adder.

CUB supports some, but not all, of NIPPC's bid adder recommendations. CUB acknowledges the inherent limitations of generic bid adders and emphasizes the importance of examining the specific terms presented by each bid. CUB also seeks symmetry in the bid evaluation process. If adders are included to account for risk presented in a utility's self-build bid, CUB contends that the IPP should also be required to demonstrate that its PPA bid contains terms that mitigate the risk addressed by the adder.

The utilities and Staff oppose NIPPC's proposed adders. They contend that, despite the presumption of a bias that favors a utility's benchmark resource, there has been little evidence offered to establish that the competitive bidding process used to compare benchmark resources with IPP bids is, in fact, biased. Therefore, the utilities and Staff argue that the introduction of generic bid adjustments would introduce—and not remove—bias in the bid selection process, and may result in the utilities acquiring high cost resources. The utilities and Staff also contend that NIPPC's analyses used to develop the proposed adders were based on insufficient data and contained fundamental flaws.

B. Discussion of Specific Risks

1. Construction Cost Over-Runs

Because ratepayers face the potential risk of construction cost over-runs for utility-owned resources, NIPPC recommends that the IE apply a bid adder of 7 percent to the estimate of initial construction costs for self-build bids. NIPPC based this adder on a comparison of the estimated and actual costs for 11 gas-fired utility-owned plants that were constructed in California during the past ten years. This data shows that the actual costs for 8 of the 11 plants were higher than estimated—with 4 of those plants costing 30 percent more.

In addition, NIPPC recommends an incremental bid adder equal to at least 5.7 percent of the initial construction costs per year for the first five years of plant operations. NIPPC explains that this incremental adder, to be applied in addition to the initial 7.0 percent adder, will account for the risk of latent defects of deferred capital expenditures. NIPPC based this adder using information reported to the Federal Energy Regulatory Commission (FERC) for 9 of the 11 California plants identified above.²

CUB shares NIPPC's concern that ratepayers are potentially responsible for construction cost over-runs for utility benchmark resources, but acknowledges the utility's claim that this risk is mitigated through the utility's ability to lock in construction costs. Accordingly, CUB recommends we either adopt NIPPC's proposed adders, or require the utility to demonstrate that its benchmark resource bid contains protections to shield ratepayers from cost over-runs.

The utilities and Staff oppose NIPPC's proposed adder for construction cost over-runs and deferred construction costs. At the outset, the utilities claim that NIPPC has failed to establish the need for the adder, as the record fails to show a bias in the evaluation process reflecting under forecasts of construction costs associated with ownership proposals. PGE notes that construction costs for its Port Westward and Biglow Canyon resources were less than the forecast costs.

² NIPPC also calculated an alternative annual adder of 4.3 percent using data for seven gas-fired plants and 12 wind plants owned by Oregon utilities. *See* NIPPC/100, Monsen/23-24.

PGE also claims that NIPPC's proposed adder to address deferred construction costs is beyond the scope of this phase of the docket. PGE explains that the risk to ratepayers of capital additions over the life of a benchmark resource is identified as Risk Item 8—not one of the four factors selected to be addressed in this phase.

The utilities also contend that the adder is not needed, because the risk of cost over-runs with benchmark resources is already mitigated by current utility practices. Idaho Power states that, when it develops a self-build bid, it includes a contingency amount to account for unexpected expenses, and adds that it is required by Idaho law to provide a commitment estimate of all anticipated construction costs for its projects. PGE notes the advances in the procurement process that allows the availability of cost guarantees for plant construction from turbine manufacturers and Engineering, Procurement & Construction (EPC) firms. PGE states that benchmark bids with these cost guarantees provide considerable benefits to ratepayers, as it mitigates the risk of cost over-runs and provides benefits when projects are completed under budget. For this reason, PGE contends that any bid that includes an overall plant construction cost guarantee should receive a higher bid score than a proposal that contains no such protection.

With regard to NIPPC's specific proposals, Staff and the utilities contend that NIPPC's analysis to derive the adders is fundamentally flawed. They contend that NIPPC used extremely limited data sets—11 plants for the initial adder and 9 plants for the incremental adder—that are simply too small to provide reliable predictions about future forecasting errors. They also argue that NIPPC inappropriately relied on historical averages and blended the costs associated with different types of plants represented, including plants that are not representative of utility benchmark resources submitted under an RFP process. PGE adds that NIPPC also failed to acknowledge that some of the cost-over runs in its data set were due to changes to regulatory standards that likely could have triggered a re-pricing of a PPA alternative.

2. *Heat Rate Degradation*

Generating facilities become less efficient over time and, as a result, require an increasing amount of fuel to produce the same amount of energy. This change in efficiency is measured by the "heat rate," where an increase in heat rate indicates a decrease in efficiency.

NIPPC contends that a heat rate adder should be used in bid evaluation to recognize the additional risk posed by utility benchmark resources. NIPPC explains that ratepayers bear the risk of heat rate degradation at utility-owned projects, where as a PPA will generally assign liability for heat rate degradation to the IPP. NIPPC proposes an adder be included to heat rate estimates for gas-fired, utility-owned plants so that the average expected plant heat rate is at least 8 percent above the initial rate. NIPPC derived this adder using a nationwide database of utility-owned generating plants for the years 1981

through 1999, and averaged together observed heat rate changes, weighted by capacity factor.³

All other parties oppose NIPPC's proposed adder for heat rate degradation. They argue that, contrary to NIPCC's contention, utility self-build bids incorporate assumptions about heat rate degradation from the plant equipment manufacturer, as adjusted for specific characteristics of the bid, such as site-specific considerations. CUB acknowledges that there may be differences between how utilities and IPPs account for heat rate degradation, but concludes that such differences would be difficult to quantify for purposes of an adder.

Staff adds that, contrary to NIPPC's implicit assumption, ratepayers are not always protected from the risk of heat rate degradation under a PPA. Staff notes that, depending upon the terms of the PPA, ratepayers may be exposed to variations in the cost of power from the IPP due to variations in the expected heat rate degradations.

The utilities and Staff also contend that NIPPC's analysis used to derive the proposed adder contains methodological flaws. Pacific Power, Idaho Power, and Staff contend NIPPC's data is obsolete, and highlight the fact that the most recent data is over 13 years old. They contend there is no evidence in the record to demonstrate that the plants included in NIPPC's data set are similar to modern plants in terms of either design or maintenance practices. PGE and Staff add that the data used consists primarily of observations from simple cycle combustion turbines—not from the combined-cycle combustion turbines that are more representative of the type of natural gas plants that will be bid into future RPFs.

3. *Wind Capacity Factor Error*

NIPPC contends a bid adder is needed to address the systematic over-estimation of capacity factors for utility-owned wind plants. NIPPC acknowledges some industry-wide improvements in forecasting technology, but maintains that newer utility-owned wind resources continue to operate at lower-than-expected levels. Using data from Pacific Power's 12 wind plants, NIPPC recommends a price bid adder of 11.7 percent for utility-owned wind resources to account for these forecasting errors.

CUB recognizes the need to address the opposing incentives utilities and IPPs have with regard to estimating capacity factors for wind plants. CUB explains that, while utilities have the incentive to forecast high capacity factors to increase rate recovery, IPPs have the incentive to assume lower capacity factors to avoid loss of revenues under the terms of a PPA. To address these opposing incentives, CUB supports the concept of a wind adder to help shield ratepayers from costs resulting from lower-than-expected generation from utility-owned resources. CUB does not, however, necessarily agree with NIPPC's methodology it used to determine the proposed adder, and CUB is not prepared to endorse any specific adder at this time.

³ NIPPC also calculated a capacity-weighted heat rate degradation of 10.4 percent for Oregon plants. See NIPPC/100, Monsen/27; NIPPC/300, Monsen/34.

The utilities and Staff oppose NIPPC's proposed adder for wind capacity. They contend there is no evidence to support the need for an asymmetric wind capacity factor adder for benchmark resources, and argue that NIPPC's proposed adder is based on flawed and incomplete analysis.

PGE, Pacific Power, and Idaho Power acknowledge the challenges to wind forecasting, but argue that efforts should be focused on ensuring that the wind capacity factors for all resource proposals, including the benchmark resource, are forecasted as consistently and accurately as possible. For that reason, Pacific Power recommends, and PGE and Idaho Power support, the use of a qualified and independent third-party technical expert to review the expected wind capacity factor associated with each project on the short list, including benchmark resources. Pacific Power contends this is the best method for achieving the goal of ensuring that all resources are compared fairly in the RFP process.

With respect to the proposed adder, Pacific Power, Idaho Power, and Staff contend that NIPPC's methodology is flawed in a number of ways. Among other things, they argue that NIPPC's reliance on historical data is problematic because current methodologies for forecasting wind plant capacity factors have improved dramatically; that the analysis relies on a data set that is too small that only examines utility-owned plants; and that NIPPC failed to properly account for plant location and operational timing issues. Pacific Power also points out that the majority of data used by NIPPC came from non-normal wind years—2009 and 2010—that further skewed NIPPC's calculations.

4. *Counterparty Risk*

The utilities contend that the evaluation of counterparty risk is an important element in examining bids from third-party resources. They claim that the creditworthiness of the counterparty, as well as the entity providing credit assurances, are important because the counterparty's ability to perform its obligations under a PPA can significantly impact overall costs to ratepayers.

PGE explains that its bid evaluation process currently examines credit risk—that is, the risk that a counterparty will not be able to fulfill its contractual obligations due to insolvency or other form of financial distress. PGE proposes changes to address transaction specific risk, which include the following:

- Execution Risk: The risk that the utility and counterparty are unable to finalize an agreement.
- Contract Modification: The risk that the counterparty negotiates modifications to the template PPA.
- Default Risk: The risk that the counterparty will default, either for a short or long duration.

- Force Majeure/Change of Law: The risk of unforeseen circumstances or changes of law that may permit the counterparty to terminate the PPA.

With support of Pacific Power and Idaho Power, PGE proposes that these risks be addressed in the non-pricing section of its scoring matrix. PGE proposes that certain terms of the model PPA be deemed non-negotiable, so that the acceptance of the terms would be a pre-condition for participating in the RFP. PGE also recommends internal guidelines for scoring bids, so that scoring adjustments would be made to any bid that proposes material changes to the RFP template PPA.

All other parties oppose the utilities' proposal for counterparty risk. NIPPC argues that there is no compelling evidence that counterparty or credit risk is ever likely to impose cost on ratepayers. NIPPC maintains that any risk to ratepayers is mitigated by terms of the PPA or excess supply that exists in the market in the event of an inability to perform.

With regard to the utilities specific proposals, NIPPC contends that the attempt to make certain contract terms "non-negotiable" is outside the scope of the docket, and runs counter to the Commission goal of keeping the RFP process flexible. NIPPC argues that, if adopted, the proposal to make these terms non-negotiable would likely result in standard contract terms to which no IPP would agree.

As to the proposal to penalize certain PPA bids, NIPPC maintains that credit is simply not a relevant factor for a fully-committed, long term PPA prior to the time a PPA is executed. According to NIPPC, the utilities' current use of credit to score bids lacks transparency, and recommends that, instead of adopting the utilities' proposal, we should prohibit any reliance on credit scoring prior to PPA execution, and instead make credit requirements applicable after execution.⁴

Although CUB acknowledges that IPP bids contain some counterparty risk to ratepayers, it does not believe that this risk warrants changes to the bid evaluation process. CUB is supportive of assigning values to credit differentials during the evaluation process, but only if a sound methodology for doing so can be established.

C. Resolution

Before we address the parties' recommendations, we clarify the framework for our review. As noted above, we reopened this investigation to explore improvements in the RFP process to address the unique risks and advantages of utility benchmark resources. Because our goal is to address any utility incentive to select benchmark resources instead of PPAs, we must first determine whether the identified risk item is related to resource ownership. We look for evidence that the risk factor is dependent upon whether the utility or third party is developing the new resource.

⁴ In its reply testimony, NIPPC also offers, for the first time, a credit adder of up to 9 percent for utility owned generation bids to level the playing field to adjust for the credit benefit provided to the utilities by the ratepayers. See NIPCC/400, Collins/19.

If the risk item is related to ownership, we then examine how those particular risks should be evaluated in the RFP process. We examine whether changes should be made to the IE's comparative analysis of a utility's benchmark resource and other resource options to ensure that the bid evaluation process is fair and reasonable. Because the comparative risks associated with different resource options are generally dependent on the facts specific to each particular bid, we generally focus on improvements that are qualitative in nature. Although we will also consider quantitative changes, such as the use of generic bid adjustments, we would require persuasive evidence that the proposed adder accurately captures the risk addressed by the adder.

Applying that framework to the parties' proposals, we make the following conclusions.

1. Construction Cost Over-Runs

We find that the risk of construction cost over-runs is tied to resource ownership. Whereas IPPs are generally required to guarantee price parameters in their bids, utility-owned resources are offered on a cost basis in recognition that they are eligible to be recovered in rates. Thus, ratepayers potentially bear the risk of construction costs beyond those originally estimated for utility benchmark resources (but also benefit when benchmark costs are lower than estimated).

We decline, however, NIPPC's proposal to address this risk through the use of generic bid adders. We place little confidence in NIPPC's data set, which is too small and includes non-representative plants. NIPPC's analysis also contains numerous flaws that undermine the reliability of the proposed adders. More importantly, NIPPC's proposal lacks precision, as it would apply bid adders to all benchmark resources equally, regardless of the facts presented by each bid. As the record makes clear, utilities have various opportunities to mitigate risk of construction cost over-runs. For example, utilities can minimize any cost over-run risk by seeking fixed price guarantees or contingency reserves, and generally adjust self-build bids to account for possible work orders and other risks. Consequently, we conclude that the application of generic bid adders to every utility-owned resource would only serve to distort the IE's comparative analysis.

To address the risk of utility construction cost over-runs, we direct the IE to provide a more comprehensive accounting of the risks and benefits to ratepayers for construction cost over-runs and under-runs. Specifically, we want the IE to provide an in-depth evaluation of the following issues:

- The contractual guarantees or other measures taken by the utility to address the risk of construction cost over-runs for the benchmark resource;
- The cost and prudence of these guarantees;

- The remaining exposure to ratepayers for cost over-runs of the benchmark resource; and
- The potential benefits of any construction cost under-runs of the benchmark resource.

Although we acknowledge the inherent difficulty of comparing a proposed utility-owned cost-based resource with an IPP bid that is not cost-based, we hope this more robust analysis will help provide a more transparent understanding of the comparative risks and benefits of construction cost over-runs and under-runs. Ultimately, we expect the IE to use this analysis to provide the Commission a recommendation as to what resource provides the best combination of cost and risk to customers.

2. *Heat Rate Degradation*

We find that the risk of heat rate degradation is linked to resource ownership, because ratepayers may bear costs resulting from the worse-than-forecast efficiency of utility-owned thermal resource. We decline, however, NIPPC's proposal to address this potential risk through the adoption of a generic bid adder. We agree with the utilities and Staff that NIPPC's analysis to derive the proposed adder contains numerous flaws. More importantly, we believe that the risks and benefits associated with heat rate degradation should be evaluated based on the individual characteristics of each resource. The use of adders would distort the fact that the utilities assess the heat rate of all thermal plant options, including benchmark resources, and that ratepayers are not always protected from the risk of heat rate degradation under a PPA.

We further decline to make other changes to assist the IE's comparative analysis of heat rate degradation. Although there may be some differences between how utilities and IPPs address heat rate degradation, we conclude that the current methods of evaluating this matter sufficiently account for the comparative risks for both benchmark and third-party bids.

3. *Wind Capacity Factor Error*

We find that the risk of wind capacity factor error is tied to resource ownership. We accept the premise that utilities and IPPs have opposing incentives when estimating capacity factors for wind plants.

We again reject, however, NIPPC's proposal to address the potential for lower-than-expected generation from utility-owned resources through the use of a generic bid adder. We do not believe that the impact these opposing forecasting incentives might have on bid evaluation can be accurately quantified. We also agree with the utilities and Staff that NIPPC's attempt to do so is based on insufficient data and contains numerous flaws.

To ensure that wind capacity factors are being examined on an equal basis during bid evaluation, we adopt the utilities' proposal to use a qualified and independent third-party

technical expert to review the expected wind capacity factor associated with each project on the short list, including benchmark resources. We conclude that this will best achieve the goal of ensuring that all resources are compared fairly in the RFP process.

4. Counterparty Risk

We agree with the utilities that IPP bids contain some counterparty risk to ratepayers and, therefore, find that this risk factor is tied to resource ownership. We conclude, however, that this risk is already addressed sufficiently in the RFP process and that no changes to the Guideline 10(d) evaluation process are required.

In adopting our RFP guidelines, we clarified that utilities should continue to address the credit and capability of prospective bidders to protect ratepayers, and allowed the utilities to include minimum bidder requirements for credit in their respective RFPs.⁵ The utilities have failed to convince us that this risk should be further addressed in the non-pricing section of their respective scoring matrix.

D. Remaining Risk Items

As noted, there are eight remaining comparative risk items left to address in this investigation. We provide the following guidance and instructions to the parties to allow a more focused discussion of these items and expedited resolution of this docket.

We direct the Administrative Hearing Division to schedule a prehearing conference to adopt a procedural schedule that includes the opportunity for parties to submit opening and reply comments. Both rounds will be filed simultaneously.

The parties' comments should follow the framework we used above to analyze each risk item. Parties should initially address whether the risk factor is related to resource ownership, and provide support for any conclusion reached. If a party believes the risk factor is related to ownership, the party should provide recommendations to help the IE's comparative analysis of that risk item for utility benchmark resources and other resource options. The parties should focus on qualitative recommendations, rather than propose quantitative adjustments.

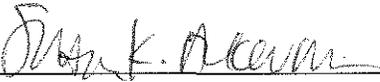
Following our review of the eight remaining risk items, we will make any necessary changes to Guideline 10(d) to incorporate the conclusions reached there and in this order related to construction cost over-runs and wind capacity factor error.

⁵ Order No. 06-446 at 8-9.

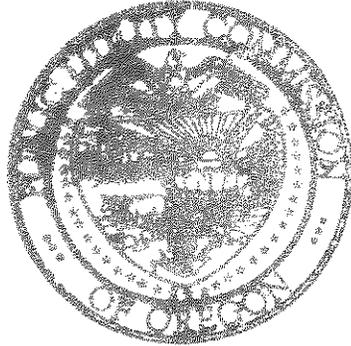
IV. ORDER

IT IS ORDERED that further proceedings be held to examine the remaining comparative risk items.

Made, entered, and effective JUN 10 2013.



Susan Ackerman
Chair





John Savage
Commissioner



Steven Bloom
Commissioner

A party may request rehearing or reconsideration of this order under 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 860-001-0720. A copy of the request must also be served on each party to the proceedings as provided in OAR 860-001-0180(2). A party may appeal this order by filing a petition for review with the Court of Appeals in compliance with ORS 183.480 through 183.484.