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February 1, 2013

Via Electronic Filing and U.S. Mail

Oregon Public Utility Commission
Attention: Filing Center
550 Capitol Street NE, #215
PO Box 2148
Salem OR 97308-2148

Re: UM 1182 - INVESTIGATION REGARDING COMPETITIVE BIDDING

Attention Filing Center:

Enclosed for filing in UM 1182 are an original and five copies of:

- **PORTLAND GENERAL ELECTRIC COMPANY'S PRE-HEARING BRIEF**

This document is being filed by electronic mail with the Filing Center. An extra copy of the cover letter is enclosed. Please date stamp the extra copy and return to me in the envelope provided.

This document is being served electronically upon the UM 1182 service list.

Thank you in advance for your assistance.

Sincerely,

David F. White
Assistant General Counsel

DFW:smc
Enclosures
cc: Service List-UM 1182

BEFORE THE PUBLIC UTILITY COMMISSION

OF OREGON

UM 1182

In the Matter of	)	
	)	
PUBLIC UTILITY COMMISSION OF OF OREGON	)	PHASE II - PREHEARING BRIEF OF PORTLAND GENERAL ELECTRIC COMPANY
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	)	
Investigation Regarding Competitive Bidding	)	
	)	

I. Introduction

Pursuant to the prehearing conference memorandum dated September 27, 2012, Portland General Electric Company (PGE) files this Prehearing Brief. This Brief is organized as follows:

- Section II addresses PGE's overall approach and position;
- Section III reviews the background in this and related dockets;
- Section IV addresses the Commission's findings and outlines the purpose of Phase II;
- Section V describes the fundamental flaws in Northwest & Intermountain Power Producer Coalition's (NIPPC) proposed adder methodology;
- Section VI focuses on the heat rate degradation issue;
- Section VII addresses the cost over-runs and under-runs issue;
- Section VIII reviews the wind capacity factor issue;
- Section IX sets forth the evidence on the issue of counterparty risk; and
- Section X provides the conclusion.

II. PGE's Overall Approach and Summary of Position

The purpose of Phase II is to determine whether improvements can be made to the evaluation, analysis, and comparison of benchmark resources and independent power producer bids under the Competitive Bidding Guidelines, particularly Guideline 10(d). As developed in the record before the Commission, the principal issues are twofold: (1) whether the utilities' current analysis and process for comparing benchmark bids with Independent Power Producers' (IPP) bids are biased; and (2) if they are biased, how should the Commission amend Competitive Bidding Guideline 10(d) to instruct the Independent Evaluator (IE) to appropriately compare benchmark resources against IPP bids.

For the purpose of analyzing these issues, PGE agrees with Staff's definition of bias in the selection process, which focuses on the quality of bid evaluation and analysis and its ability to capture each bid's cost and risk.

> If there are two bids that leave the utility and its ratepayers exposed in substantively different ways to at least one of the four risks under investigation, and the bid evaluation criteria does not accurately account for this difference, then that is evidence that the bid evaluation criteria contains bias. A second way to determine if bias exists is if two identical bids, one from the utility and one from an IPP, are given different scores in bid evaluation.

See Staff/200, Proctor/18, quoting from Staff/100, Proctor/7.

NIPPC's data sets are the only evidence offered to suggest that bias exists. However, these data sets are fundamentally flawed and offer no evidence of bias, as Staff concluded in its Reply Testimony:

Q: What facts have been entered into the record that substantiates NIPPC's implicit assumption that IPP bids are treated unfairly?

A: No facts exist in the record to date.

Q: What is Staff's overall conclusion about applying NIPPC's Bid Adders?

A: NIPPC has not shown that its proposed bid adders are required at this time. Staff/200, Proctor/6, 14.

Without any evidence demonstrating that the selection process favors benchmark resources over PPAs, the application of adders to the utility ownership options would frustrate the fundamental goal of this docket, which is to identify whether any bias exists and if it does, remove it. When the evaluation of benchmark and IPP bids appropriately captures each bid's relative cost and risks for utility customers, the use of asymmetric adders introduces, rather than removes, bias. The introduction of bias would expose customers to potentially higher cost by leading to the selection of projects that do not offer the best mix of costs, risks, and benefits. Indeed, the Commission has already highlighted this concern. UM 1276, Commission Order No. 11-001 at 5 (Jan. 3, 2011) ("We do not know whether the current regulatory process has, in fact, failed to prevent the utilities from acquiring higher cost, utility-owned resources. . . . . Because we have not quantified the impact of the bias on rates, however, the cost of the proposed incentives might greatly exceed whatever harm might otherwise be inflicted on customers").

The NIPPC data sets, and their obvious shortcomings, reveal the inherent problems with a generic adder methodology and indicate that the investigation to improve competitive bid evaluation should not focus on differences between benchmark versus PPA. *Id.*/5. Rather the bid analysis and evaluation process should capture costs, risks, and benefits to our customers based on the individual characteristics of each bid, not on

perceived or suggested attributes associated with the categorization of bids (i.e., benchmark resource or PPA). If a bid provides customers with protection from risks or reduces cost, its score should reflect that fact. If a bid exposes customers to risks or reflects higher costs, the scoring should reflect that fact as well. NIPPC's ad-hoc adder approach would create a non-transparent and unduly complex bid review and selection process. PGE/200, Outama-Bettis-Mody-Hager/4. In contrast, improving the accuracy of the evaluation process, based on the individual characteristic of each bid, is more likely to lead to a transparent, reliable, and repeatable process. PGE/100, Outama-Bettis-Mody-Hager/5.

PGE's specific recommendations for Phase II are as follows:

Heat Rate Degradation: In its evaluation and scoring of competitive bids, PGE already considers the heat rate degradation for thermal benchmark resources based on the turbine manufacturer's specifications. The evidence reveals that no improvements to this approach are currently available or practical. Accordingly, PGE recommends no change in the evaluation and analysis of competitive bids for this item.

Cost Over-Runs and Under-Runs: The record reveals insufficient evidence to show bias in the evaluation process reflecting "under forecasts" of the construction cost associated with ownership proposals, including benchmark resources. In fact, the construction costs for PGE's major capital projects (Port Westward and Biglow Canyon) have been less than the costs submitted in the RFP or forecasted. PGE proposes that benchmark bids that contain cost caps supported by third party agreements, like an Engineering, Procurement & Construction (EPC) agreement or an agreement with the turbine manufacturer, receive a higher bid score. A higher score for these bids is

warranted because customers receive the benefit if actual construction costs are under budget, while receiving protection against the major sources of risk for cost over-runs. PGE/100, Outama-Bettis-Mody-Hager/7.

Wind Capacity Factors: No evidence has been introduced to support an asymmetric, mechanical wind capacity factor adder for benchmark resource projects. Most significantly, wind forecasting methods are changing and improving. No evidence has been introduced to suggest that past forecasting inaccuracies will be repeated in the future. While PGE opposes NIPPC's proposed wind capacity factor adder, it supports PacifiCorp's suggestion that a qualified and independent third-party technical expert review the expected wind capacity factor associated with each project on the initial short list, including benchmark resources. PGE/200, Outama-Bettis-Mody-Hager/10. With the use of an independent wind capacity expert, the application of adders, at best, is unnecessary and, at worse, could lead to the selection of higher cost resources.

Counterparty Risk: PGE disagrees with NIPPC's testimony that counterparty risk is not measurable and therefore should not be assessed. PGE proposes enhancements to its current treatment of counterparty risk in the RFP scoring matrix. PGE's current approach incorporates a limited aspect of counterparty risk – primarily, credit risk – into the evaluation process. Credit risk refers to the risk that the counterparty will no longer be able to fulfill many or all of its contractual obligations due to insolvency or other financial deterioration. PGE proposes consideration of certain non-negotiable terms in the RFP template contracts as a method for mitigating other counterparty risk. PGE also proposes taking into account bidders' proposed changes to the RFP template Power Purchase Agreement (PPA).

III. Background

In 2006, the Commission opened docket UM 1276 to address the inherent incentive for utilities to favor ownership of generation assets over PPAs with third parties. Order No. 11-001 at 1. According to the Commission, the utility's incentive to select its own resources flows from two sources. First, "owned resources offer a utility an opportunity to earn a return, while PPAs do not." *Id.* at 2. Second, "rating agencies may consider PPAs as long-term commitments that have debt-like obligations. As a result, the rating agencies may impute debt equivalency amounts to a utility's balance sheet, which could negatively impact the credit ratios of a company." *Id.*

In UM 1276, the Commission considered two potential solutions to address and mitigate these incentives: (1) an adjustment that allowed utilities to capitalize the net present value of the capacity costs of PPAs and (2) an incentive proposal that would have given PPAs a risk avoidance discount in competitive bidding and provided utilities with a 10% pre-tax adder on the forecasted costs of qualifying PPAs. *Id.* at 3. The Commission rejected both proposals because it was unable to quantify or assess the impact of the incentive to select utility ownership on how utilities evaluate and analyze benchmark resources compared to IPP bids:

> [E]ven after this lengthy proceeding, we know little about the scope and impact of this bias. We have identified its existence, but we 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.

Id at 5. In short, the Commission could not determine whether the incentive to favor utility-ownership had in fact resulted in evaluation or selection bias in the competitive bidding process.

Accordingly, the Commission reopened UM 1182 to reconsider three additional issues: (1) whether the role of the IE should be expanded through negotiation and final resource selection (Guideline 11); (2) whether the threshold for a "major resource" should be lowered to include more projects in the competitive bidding process (Guideline 1); and (3) determination of the appropriate analytic framework and methodologies to use to compare utility-owned resources to purchased power from an IPP (Guideline 10(d)). *Id.* In Phase I, the Commission addressed the first two issues by electing not to expand the IE's responsibilities (while reserving the right to require expanded IE involvement on a case-by-case basis) and declining to lower the threshold for "major resource" subject to the competitive bidding process. UM 1182, Order No. 11-340 (Sept. 1, 2011) at 2. This Phase II concerns the third issue.

The Commission described the scope of this phase as follows:

> We want a more comprehensive accounting and comparison of all of the relevant risks, including consideration of construction risk, operation and performance risks, and environmental regulatory risks. We also want more in-depth analysis of all of these risks. We invite comment on the analytic framework and methodologies that should be used to evaluate and compare resource ownership to purchasing power from an independent power producer.

Order No. 11-001 at 6. In Order No. 12-324, the Commission narrowed the focus of this phase to four specific issues: Cost over-runs and under-runs; wind capacity factor; counterparty risk; and heat rate degradation. *Id.* at 4.

IV. The Commission Has Made No Findings that the Evaluation Process is Unfair, Discriminatory or Biased

The parties have devoted considerable attention to what exactly the Commission has previously determined in terms of the alleged utility bias. NIPPC claims that the Commission has already concluded that the "utility procurement process favors the

development of UOG projects over entering into power purchase agreements (PPAs) on account of the utilities bidding incentives." NIPPC/300, Monsen/3. NIPPC's witnesses argue that the only remaining issue is to quantify and correct the utility bias. Staff/100, Proctor/11; NIPPC/300, Monsen/13. NIPPC, therefore, focuses on quantifying the value for "adders" to be applied against the benchmark resource, rather than establishing the predicate need for adders at all. NIPCC/300, Monsen/13 ("examination of whether a bias exists is unnecessary").

PGE and Staff disagree. PGE/100, Outama-Bettis-Mody-Hager/3; Staff/100, Proctor/6; Staff/200, Proctor/15. The Commission concluded that utilities' have an incentive to favor utility ownership, but the Commission has not found that the utilities' evaluation and analysis of benchmark bids, compared to PPA bids, is biased. Indeed, the entire point of Phase II is to determine whether the evaluation and analysis of such bids is biased and, if so, how the evaluation and analysis can be improved. Staff/200, Proctor/15 ("NIPPC assumes that the existing bid evaluation methodology of the three electric jurisdictional utilities is biased in favor of the Benchmark Resource bid. However, this investigation must first establish that bias before adjusting bids in any way").

The term "bias" has several meanings and those different meanings have caused confusion, at least on NIPPC's behalf. The Merriam Webster definition of the term is particularly instructive. It defines bias as follows: (a) Bent, tendency; (b) an inclination or tendency of temperament; (c) an instance of such prejudice. www.merriam-webster.com/dictionary/bias. In short, the term has at least two distinct meanings. The first meaning is a bent, tendency or inclination in a certain direction. The second is action or conduct that is caused by the tendency or inclination.

The Commission has concluded that utilities are biased towards ownership in the first sense of the term but not in the second. The context of the Commission's prior findings is instructive. In Order No. 11-001, the Commission based its conclusion of utility bias on the ratemaking framework that allows a utility to earn a return on rate base, but not on PPAs, and the potential for imputed debt to adversely impact a utility's credit score. Order No. 11-001 at 5. The finding of utility bias was not based on any analysis of how competitive bids are scored, evaluated or selected.

The terms of the Commission order make it similarly clear that the Commission found an incentive to select ownership option, not that utilities had in fact, discriminated against PPAs: "this bias is really a logical inference drawn from an understanding of ratemaking practices and the effectiveness of incentives. . . . We do not know whether the current regulatory process has, in fact, failed to prevent the utilities from acquiring higher cost, utility-owned resources." *Id.* at 5.

V. NIPPC's Flawed Adder Approach Should Be Rejected

NIPPC proposes "adders" as potential improvements for evaluating competitive bids for all of the four items at issue. The adders are intended to correct alleged flaws in the scoring of benchmark resources. For each proposed adder (with the exception of the counterparty adder), NIPPC relies on historical data to compute average "errors" to show the magnitude of the alleged bias.

A. NIPPC Offers Flawed Data Sets

The NIPCC data sets are riddled with data deficiencies that undermine the reliability and accuracy of the proposed adders. Three deficiencies that have been identified are:

- Sample size too small (cost over-runs and under-runs)
- Non-representative samples (heat rate degradation, cost over-runs and under-runs, and wind capacity factor);
- Irrelevant historical time period (heat rate degradation, cost over-runs and under-runs, and wind capacity factor).

PGE/100, Outama-Bettis-Mody-Hager/3; Staff/100, Proctor/11-12; Idaho Power/200, Stokes/7, 15; PAC/200, Kusters/22.

NIPPC's approach of using historical averages is inherently suspect. The averages are statistical estimates, which may or may not apply to any particular benchmark resource and are subject to sampling errors. PGE/200, Outama-Bettis-Mody-Hager/2. NIPPC's witnesses openly acknowledge they cannot apply standard measures of accuracy and confidence (standard deviation and confidence intervals) to their estimates. NIPPC/300, Monsen/15-16.

Without these measures of precision, we cannot conclude with any confidence that bias even exists, much less apply 'corrections' in the scoring of any particular benchmark resource or competitive bid. This deficiency applies to each of the proposed adders NIPPC calculates for heat rate degradation, construction cost over-runs, and wind capacity factor. PGE/200, Outama-Bettis-Mody-Hager/2-3.

Along with other parties, PGE highlighted the lack of any measure of accuracy and confidence in the NIPCC data sets. *Id.* In response, NIPPC adopts the puzzling position that it is "not meaningful to calculate a confidence interval for the data" or standard deviation collected from its eleven California power plant study because the sample was not randomly selected by NIPPC's witness. NIPCC/300, Monsen/16.

We agree that the eleven-plant data set was not based on a random sample and that therefore a confidence interval cannot be calculated. We disagree with the implications NIPPC draws however. Far from showing that a confidence interval is "meaningless," as NIPPC suggests, this shows that the eleven-plant data set cannot be relied upon because the small number of plants in the sample were not randomly chosen and therefore no confidence can be placed in the results.

A random sample is not an end in itself. Statisticians favor random samples because they result in useful estimates. NIPPC's eleven plant survey fails this basic test and produces no useful estimates.

Finally, NIPPC's adder approach is flawed because it assumes that the IPP bid alternatives have no risk related to cost over-runs, heat rate degradation, and wind capacity factors. This is simply not true and NIPPC has offered no supporting evidence other than generalized, conclusory statements. Most tolling agreements (the most common form of PPA for a gas-fired plant) place the majority of the risk of heat rate degradation on the utility purchaser by permitting the IPP to reset the heat rate each year. PGE/100, Outama-Bettis-Mody-Hager/17. PPAs have different terms and conditions that allocate risk, benefits, and obligations differently between IPPs and utilities. PAC/200, Kusters/4 ("contract structures could include fixed or variable price power purchase agreements, tolling agreements, or lease agreements, all of which will have different terms and conditions that create different types and degrees of risk to customers").

Moreover, utilities bear some risk under a PPA if the wind capacity factor was too high. Utilities must purchase replacement power and renewable energy credits that can increase power cost. PGE/100, Outama-Bettis-Mody-Hager /27-28. It also bears noting

that throughout this proceeding, NIPPC has refused to produce in discovery a single executed PPA to support its claim that PPAs provide absolute protection from risks that exist in the utility-owned resources. Without such evidence of the *difference* in risk exposure between PPAs and utility ownership, there is no basis for applying adders.

B. Other Policy Objections to NIPPC's Adders

Any adder approach suffers from two other inherent flaws, one relating to the supporting data and the second a policy concern. First, the underlying source data must reflect current technology and market conditions. PGE/100, Outama-Bettis-Mody-Hager/3; PGE/300, Jacobs/9,14. If the sample data is not reflective of current conditions, the predictions are inherently unreliable because the sample data are not reflective of benchmark resources included in the competitive bidding process. For example, a survey of the safety of Ford's Pintos will not reliably predict the safety of modern day cars. In addition, the sample set must also reflect a robust and reliable sample size. Any given sample may well suffer from data that are either too old to be representative or too small to provide a reliable sample size. PGE/100, Outama-Bettis-Mody-Hager/3-4.

Second, policy considerations weigh heavily against a mechanical adder applied to every benchmark resource. In particular, the application of a mechanical adder approach could well make the competitive bidding process *less* competitive. PGE/200, Outama-Bettis-Mody-Hager/4. Generic, uniform adders essentially handicap the score for benchmark resources. The scope of the adders NIPPC proposes is astounding and will cripple benchmark bids. As proposed, benchmark resources would face a 44.5%[1] (cost over-run and counterparty adder) adder to the cost of the bid, *plus* an 8% heat rate

[1] This is based the sum of NIPPC's adders for cost over-runs (7%), post-construction capital additions (28.5%), and counterparty risk (9%).

degradation rate adder or 11% wind capacity factor adder. IPPs will recognize that such high adders have priced benchmark resources virtually out of the competition. This provides IPPs with the opportunity and incentive to increase their bid price because the benchmark resource cost will be artificially escalated. PAC/200, Kusters/10 ("imposing bid adjustments on one group of alternatives may harm customers because the remaining bidders are then incented to increase their bid price"). A less competitive bidding process is not in our customers' best interest. PGE/200, Outama-Bettis-Mody-Hager/4.

VI. Heat Rate Degradation

A gas-fired plant's heat rate – the rate at which the plant converts gas to electricity – is an important indicator of the efficiency of the gas plant. PGE/100, Outama-Bettis-Mody-Hager/16. The heat rate factor and how it may degrade over the life of the plant are important in assessing the economic value and cost of a bid resource. Consequently, an accurate estimate of the heat rate of the life cycle of a plant is necessary for an accurate cost estimate. *Id.*

PGE considers heat rate degradation for benchmark resources in its bid evaluation, including the cost of the maintenance service agreements (called Long Term Service Agreements) needed to maintain the projected heat rate for the plant's useful life. *Id.* This long-run degraded heat rate is based on information provided by the turbine manufacturers. *Id.*/17. PGE's benchmark resources already incorporate the long-run degraded heat rate and the maintenance costs to achieve the projected heat rates. PGE/200, Outama-Bettis-Mody-Hager/5. PGE adjusts any bids (benchmark and IPP bids alike) that do not include a long-run degraded heat rate or ones that are below the long-run degraded heat rate specified by the turbine manufacturer. *Id.*

NIPPC estimates the average degradation in heat rate for utility-owned generation to be 8%. NIPPC/100, Monsen/27. Monsen's initial study allegedly supported a 5.6% floor, but, for reasons that are unexplained, that estimate increased to 8% in Monsen's Direct Testimony. NIPPC recommends that 8% act as a floor for the average degradation in heat rate for each utility-owned resource over time. *Id.*

NIPPC's proposal should be rejected for several reasons. First, Monsen's study of historic utility-owned generation fails to show any bias or problem whatsoever. His study reflects the absolute heat rate degradation rate for the sample generating facilities, but fails to compare the actual heat rate degradation with any utility forecast of heat rate degradation. *See,* e.g., NIPPC/300, Monsen/6 (citing heat rate degradation of utility-owned plants without any consideration of utility forecasts of heat rate degradation). Because Monsen ignored utility forecasted heat rate degradation, for all we know the utility forecasted heat rate degradation was equal to (or higher than) the actual heat rate degradation. PGE/300, Jacobs/9. To determine whether any bias existed, Monsen would have had to compute the average difference between actual heat rates and utility forecasted heat rates or between actual heat rates and proxy forecasts based on manufacturers' data. *Id.*/11. But Monsen provides no such baseline in his data sets.

Second, Monsen used an inappropriate data set consisting of plants and maintenance programs that are decidedly different than current generating facilities. Historical degradation in the power plants making up Monsen's sample might be indicative of heat rates for new power plants but only if the plants are similar, operated in a similar fashion, and maintained consistent with current standards. PGE/300, Jacobs/10. However, Monsen's sample power plants satisfy none of these conditions.

The NIPPC sample included data as early as 1981 and some power plants that came on line even earlier. *Id.*/12. Staff noted that the data set appeared to include plants with an online date of 1923. Staff/100, Proctor/15. The most recent data was from 1999. NIPPC/100, Monsen/25. In addition, the sample is dominated by simple cycle turbines, not modern combined cycle turbines. PGE/300, Jacobs/12. Moreover, there is no evidence that the maintenance practices for these sample power plants are similar to today's standards. As Dr. Jacobs testified, NIPPC's sample should have been composed of "modern gas-fire combined cycle plants with Long Term Service Agreements (LTSA), which have been maintained according to manufacturers' recommendation" given that benchmark resources include maintenance levels consistent with a LTSA. *Id.*/10. In short, the NIPPC analysis is comparable to predicting gas mileage for a well-maintained Prius based on samples dominated by Cadillac's from the 1980s and 1990s with no documentation regarding maintenance or operating conditions (city or highway).

Third, Monsen's study also failed to adjust for plant commitments and dispatch. It is well known that a plant's heat rate is affected by dispatch and operating decisions. PGE/300, Jacobs/11. Because starting the plant requires additional fuel and results in lower efficiency, the number of times a plant is started directly affects the plant's heat rate. *Id.* When a combined cycle plant contains one or more combustion turbines and one or more heat recovery steam generators, the efficiency of the plant can vary based on the number of components operating. *Id.*/10. In short, a plant's operation and dispatch directly impacts heat rates. To properly determine the risk that heat rate degradation will vary from forecasts based on turbine manufacturers' data, the sample set must reflect

dispatch and commitment of the plants similar to those assumed for the benchmark resource. *Id.*/11.

Finally, Monsen's analysis contains several other technical flaws. The change in heat rate degradation from 5.6% in his initial study to 8.0% in direct testimony is unexplained. In addition, Monsen measures heat rate degradation not from the "as bid" heat rate or even the earliest observed heat rate but rather from the absolute minimum heat rate observed for each plant. This could result in the use of artificially low baseline heat rates that may reflect measurements prior to some of the "non-recoverable degradation"[2] or at the most efficient point in the maintenance cycle. PGE/300, Jacobs/13-14.

Monsen's methodological shortcomings render his study unreliable as a test of how PGE's considers heat rate degradation in evaluating benchmark resources. Dr. Jacobs attempted to construct a more appropriate data set to test whether improvements to the long-run average degradation rates could be identified. His study is reflected in *Id.*/14-30. Ultimately, Dr. Jacobs concluded that publicly available heat rate and generation data are unlikely to provide useful estimates of heat rate degradation. *Id.*/30. In short, no evidence suggests that either (i) the current method of forecasting heat rate degradation is biased or (ii) that improvements to that methodology are warranted.

VII. Cost Over-Runs and Under-Runs

Monsen proposes that the IE assign a bid adder of 7% to the projected construction cost of a utility-owned project. NIPPC/100, Monsen/12. He bases this adder on an eleven plant survey of utility-owned projects in California. *Id.*/11. He

[2] Non-recoverable degradation is the deterioration in plant performance that cannot be reversed with maintenance and will usually occur during the first year of plant operation. PGE/100, Outama-Bettis-Mody-Hager/17.

computed an average cost over-run in construction costs of 7% for these eleven projects and proposes that for each benchmark an adder of 7% be applied. He also proposes an adder for post-construction capital additions.

A. Construction Cost Over-Runs

As with the heat rate degradation analysis, Monsen's cost over-run sample is riddled with problems and errors. The data set upon which Monsen bases the construction cost adder is "extremely small", consisting of eleven power plants. Staff/100, Proctor/11. Even Monsen acknowledges that "a larger data set would be preferable." NIPPC/300, Monsen/25. His eleven plant data set includes no renewable projects and only 4 modern combined cycle gas plants. Such a small sample size cannot provide reliable predictions about future forecasting errors.

The data set pooled diverse sets of technology that may not be indicative of future forecasting errors for new or different technologies: "Staff objects to pooling Combined-Cycle Combustion Turbine capital cost with Single-Cycle Combustion Turbine capital costs. If the utility's RFP solicits a CCCT, a gas plant adder should be calculated using only CCCT capital costs. The same argument applies if the utility solicits a SCCT." Staff/100, Proctor/11.

Most telling, the cost estimates in Monsen's eleven plant survey were not provided under the same conditions that apply to benchmark resources in an Oregon RFP where cost estimates are verifiable, subject to scrutiny by an Independent Evaluator, and bid into a competitive bidding process. PGE/300, Jacobs/32-33. In other words, the cost over-runs in Monsen's eleven plant data sets are not indicative of possible cost-over-runs for benchmark project submitted as part of an Oregon competitive bidding process.

The project with the largest cost over-run in Monsen's sample (four Southern California Edison (SCE) peaking plants) illustrates this point. For these plants, The California Public Utilities Commission allowed SCE to recover $260 million in costs, an alleged 30% cost increase over the cost estimate. *Id.*/33. However, the CPUC Commissioners ordered the construction of black-start reliability, "must-run" resources in a very short time. *Id.*; PAC/200, Kusters/23. The plants were not subject to a competitive bidding process and compared with other resource options. Moreover, the only reference to the initial cost estimate was found in testimony supporting the inclusion of these plants in rate base and stated that the "original estimate was made under condition of 'limited time'." PGE/300, Jacobs/34.

In other words, none of the conditions that apply to an Oregon competitive bidding process were present for the California plants in the Monsen data: the utility had no reasons or incentive (or time) to produce a reliable cost estimate; construction was ordered without a cost estimate; and the benchmark resource was not compared with other alternative resources. In short, "[t]his is not the kind of estimate that Oregon utilities would be expected to provide for a benchmark bid and the fact that it was over-run is not relevant." *Id.*/34.

Finally, the cause of the cost over-runs in Monsen's sample should be the type that would *not* increase the price of a PPA alternative. In other words, adders should be designed to address bias. However, if the reason for the cost over-run for the benchmark project, would similarly have resulted in a re-pricing of the PPAs, no adder should apply because there is no bias to correct.

The NIPPC eleven-plant sample includes a 26% cost over-run on PG&E's Gateway plant, which arguably could have similarly increased the cost of a PPA alternative. NIPPC identified the cause of this cost over-run as a change in regulation: a new State Water Board requirement for dry cooling. MRW & Associates Report at 11. An IPP would have been subject to the same unanticipated requirement and the attendant compliance cost. However, depending upon the terms of the PPA, an IPP could take the position that this type of change in law should be borne by the utility and its customers. PGE/300, Jacobs/34. If so, the PPA prices would be adjusted to reflect this additional cost. In short, "the over-run is one that would have impacted ratepayer costs whether it had been associated with a benchmark bid or an IPP contract. Therefore, it should not be included in determination of a benchmark-specific bid adder." *Id.*/34.

Monsen is quick to point to anecdotal evidence of cost over-runs in Oregon, but this is unpersuasive. NIPPC/300, Monsen/19. He has conducted no study or survey of cost over-runs or under-runs for Oregon benchmark bids. His testimony studiously ignores PGE's experience with its two benchmark resources that were subject to Oregon's competitive bidding process. PGE completed construction of its two benchmark resources that resulted from an RFP – Port Westward and Biglow Canyon – under budget. The initial cost estimate for Port Westward was $298.2 million; PGE completed construction for $279 million, reflecting a significant savings for our customers. PGE/100, Outama-Bettis-Mody-Hager/23. Biglow Canyon was developed in three phases. Phase I was budgeted at $261 million and installed at a cost of $256.5 million, reflecting 1.7% cost saving. Phase II was budgeted at $325.5 million and installed for $318.4 million or a 2.2% cost savings. Phase III was estimated at $428.4 million and

installed for $383.7 million or a cost savings of 10.4%. *Id*/24. PGE's experience obviously provides no basis for a construction cost over-run adder. NIPPC's adder approach, if applied consistently, could arguably support an adder in favor of the benchmark resource.

B. Capital Additions

Monsen also proposes another construction cost adder for "deferred construction costs." The justification for this further adder is a single plant which faced a $14 million capital expenditure after commercial operation. NIPPC/100, Monsen/19. Monsen claims that capital expenditures in the first five years in excess of depreciation should be considered a deferred construction cost and counted as an adder. *Id.*

As a threshold matter, this issue is beyond the scope of Phase II. As noted in the May 30, 2012, Administrative Law Judge's Ruling, the parties identified a list of 12 issues, one of which was capital additions over the resource life. *Id.* at 2 (Item 8). The ALJ described this item as the risk that "ratepayers pay for prudently incurred and cost-effective capital additions over a benchmark resource life regardless of expectations." *Id.* This issue was not selected as one of the four items for Phase II. Order No. 12-324 at 4. Accordingly, Monsen's testimony on this issue should be disregarded.

In any event, Monsen's justification is extremely weak. A single example hardly proves that all post-operation capital expenditures are deferred construction costs. PGE/300, Jacobs/35. In this case, the data set for Monsen's survey is even smaller (9 plants) than the eleven plant survey for cost over-runs. NIPPC/100, Monsen/22. This 9 plant survey has all the statistical problems as the eleven plant sample in terms of sample size, non-representative samples, and irrelevant historic period.

Furthermore, Monsen assumes without any evidence that the benchmark bids did not include any capital expenditures during the first five years that exceed depreciation and concludes that all increases are due to expenditures that should have been anticipated. *Id.* NIPPC appears to speculate that benchmark bids in Oregon will never include post operation capital additions. Without that speculation there is no basis for this component of the adder. But this just highlights the foundation of this adder: speculation.

The size of the deferred construction cost adder is an astounding 5.7% for each of the first five years, or a total of 28.5% of the initial cost. This is over 4 times the cost-over-run adder and higher than the example Monsen uses which reflect only 23% of the plant's construction cost. *Id.*/36.

Monsen appears to have exaggerated the level of post construction capital costs in several ways. First, Monsen mistakenly assumed that the FERC Form 1 plant balance figures reflected depreciation; he therefore added back depreciation to arrive at plant balance figures. In fact, the FERC Form 1 figures did not reflect depreciation. PGE/300, Jacobs/38. In other words, when Monsen added back depreciation, he was double counting because the plant balance figure was an undepreciated amount. *Id.* Correcting for this error reduces the capacity-weighted average increase to 2.12% annually. *Id.*

But even this figure is artificially inflated. Most of the above-average annual increase is attributable to the SCE peaker plants that were developed quickly under the California commission's order. *Id.*/39. It is not surprising that some construction costs were incurred after operation given the circumstances under which these plants were planned and constructed. As mentioned earlier, the conditions under which these plants were developed could not be further from the competitive bidding process in Oregon.

Finally, Monsen's selection of a 5-year period of measurement is arbitrary and inflates post-construction capital additions. For the nine plants used in the survey, only two plants have data for the fifth year (Miramar I and Palomar). In both cases the fifth year is more than double the five year average, "which highlights the arbitrariness of the choice to use a five year average." *Id.*/40.

C. PGE's Proposal for Benchmark Resources with Cost Guarantees

In light of changes in power plant engineering, procurement and construction, PGE proposes a modification to how it scores benchmark bids. PGE/100, Outama-Bettis-Mody-Hager/20. One of the major advances in the procurement process is the availability of cost guarantees for major components and plant construction from large turbine manufacturers and Engineering, Procurement & Construction (EPC) firms. *Id.* Under this current practice, a large fraction of the total construction cost is covered by cost guarantees provided by the equipment manufacturer and the EPC. No price adders are permitted except through approved change orders. *Id.*/21. The utility manages the change order process. PGE's experience in managing the change order process has been positive. For Port Westward the change order rate was below 2% and for Big Canyon it was 1%. *Id.*

Benchmark bids with cost guarantees provide considerable benefit to our customers. The risk of cost over-runs is substantially mitigated and customers continue to receive the benefits of potential cost under-runs when projects are completed under budget. Accordingly, PGE proposes that any bid that includes an overall plant construction cost guarantee either by the seller or by a third-party such as a qualified EPC should receive a higher bid score than a proposal that includes no such protection. *Id.*/22.

D. NIPPC's Arguments Against PGE's Proposal Are Unpersuasive

NIPPC suggests that cost guarantees from EPC contracts fail to mitigate the risk of cost over-runs from change orders and latent defects. NIPPC/500, Kasper/2. NIPPC's witness recommends against the "assumption that an EPC contract will always insulate the utility/owner against cost over-runs." *Id.*

NIPPC's testimony misses the mark on several fronts. NIPPC is attacking a straw man. No one has ever suggested that EPC cost guarantees eliminate all risk of cost over-runs. Our Direct Testimony states that the benefit of EPC cost guarantees is that they cover "a large fraction of total construction cost" leaving a residual risk that "is very small." PGE/100, Outama-Bettis-Mody-Hager/21. Given the scope of these cost guarantees, the "likelihood that plant construction costs actually paid would materially exceed the cost estimates at the time of bid evaluation is low." *Id.* PGE's witnesses always acknowledged that the cost guarantees are subject to change orders.

Nevertheless, it is undisputed that contract guarantees remove a large portion of construction costs as a potential source of cost over-runs for new plants. Moreover, benchmark resource bids address the residual risk in several ways. Benchmark resource bids typically include a certain percentage for contingencies to cover the cost potentially associated with change orders. PacifiCorp/100, Kusters/18. PGE also actively manages the change order process, keeping the change order rate at less than 2% for Port Westward and 1% for Biglow Canyon, both below industry average. PGE/100, Outama-Bettis-Mody-Hager/22. It also bears noting that customers benefit from a cost guarantee EPC that contains a contingency to account for change orders. The cost guarantee protects customers from a major source of the cost over-runs risk while providing

potential benefit if changes orders do not fully absorb the contingency amount. In that case, construction costs are under budget with customers receiving the benefit of this cost savings. PPAs offer no similar potential customer benefit.

Other risk factors NIPPC identifies are similarly unpersuasive. Latent defects are typically addressed by seeking manufacturer's guarantees, the cost of which is included in the bid price of the benchmark resource. PGE/100, Outama-Bettis-Mody-Hager/20-21. Cost over-runs caused by force majeure events or conditions that trigger the change of laws apply both to benchmark resources and PPAs. NIPPC/500, Kasper/8. Kasper appears to suggest that "force majeure" events that impact a PPA do not cause harm to utility customers because the utility can terminate the contract. *Id.*/17. This ignores both the physical risk that PGE may not be able replace energy (physical risk) and the financial risk that replacement power may be more expensive. PGE/100, Outama-Bettis-Mody-Hager/32-33.

Finally, NIPPC's witness objects to PGE's proposal by pointing out that "there is no assurance that EPC contractors will offer the same protections in a few years from today." NIPPC/500, Kasper/11. This is not an objection to PGE's proposal at all. PGE proposed to provide a higher score to benchmark resource projects *if* they include an EPC contract with cost guarantees. PGE/100, Outama-Bettis-Mody-Hager/22. If a benchmark resource lacks cost guarantees (either because the bid is not structured in that manner or in the future, if as Kasper speculates, the EPC market no longer offers them), the utility-owned resource will not receive the higher score.

VIII. Capacity Factor for Wind Generation

A wind plant's capacity factor is the ratio of average megawatts generated relative to the plant's nameplate capacity. NIPPC proposes a wind capacity factor adder to be applied to utility-owned wind projects. The basis for the adder is NIPPC's witness's limited survey of PacifiCorp's wind facilities. NIPPC/100, Monsen/30. Monsen claims that PacifiCorp overestimated the average capacity factor by 11.7% over the entire period. *Id.*/31. NIPPC's proposal is for the IE to reduce the capacity factor associated with any proposed utility-owned wind generation by over 11.9% when compared against IPP bids. *Id.*/33.

A. Rather than Removing Bias, NIPPC's Proposed Adder Introduces Bias

Both PGE and PacifiCorp support the use of an independent third-party wind assessment expert to evaluate the capacity factor estimates associated with all bids on the short list. PGE/200, Outama-Bettis-Mody-Hager/10; PacifiCorp/100, Kusters/6. In fact, PGE is using an independent wind expert in our current renewable RFP to review the capacity factor of all bids, including the benchmark proposal, on the short list. PGE/200, Outama-Bettis-Mody-Hager/10. The capacity factor expert makes adjustments to each bid to ensure non-discriminatory and accurate treatment of bids included in the short list. PacifiCorp/200, Kusters/31. This proposal reflects the best approach to ensure that the bid evaluation method and analysis reflects appropriate scoring for benchmark and IPP bids and reflects an independent assessment of each bid's appropriate capacity factor.

NIPPC's proposed adder would have exactly the opposite effect. By applying an asymmetric capacity factor adder to utility-owned projects only, NIPPC's proposal

ensures that the utility-owned projects will reflect an arbitrary adder and comparable IPP bids will not.

NIPPC's adder is based on the unsupported and incorrect assumption that forecasts of wind capacity factors are static and unchanging. In fact, forecasting techniques have evolved considerably. NIPPC's study relies on historic wind data from a time when wind power was in its infancy in the United States. PGE/200, Outama-Bettis-Mody-Hager/6. At that time, extensive U.S. wind data were not yet available and models were using small samples. As these shortcomings in the forecasting became apparent, forecasters made adjustments to improve their forecasts. *Id.* This reflects the ordinary development and improvement in forecasting as a new technology is introduced and additional data, experience, and knowledge grow over time.

NIPPC's turns this normal growth and development on its head. Monsen assumes that utility-owned projects, unlike all the other IPP bids, will repeat the mistakes of the past and ignore new data and improved forecasting methods. Monsen provides no evidence for this plainly false assumption.

As with the other adder data sets, the wind capacity factor survey analysis suffers from several of the same critical problems. First, the sample size is extremely small. Monsen's study focused exclusively on PacifiCorp wind facilities which have a very short history of operation. PacifiCorp/200, Kusters/35. The NIPPC analysis fails to take into account that the majority of the generation data used is from only two wind years (2009 and 2010). *Id*/36. Adopting artificial adder based on very limited data, especially when the driving factor – wind – is recognized to vary from year to year, is likely to lead to inaccurate estimates. PGE/200, Outama-Bettis-Mody-Hager/7.

One of the risks involved in using a small sample is that the sample average may not be representative of the true average. That risk applies with considerable force to NIPPC's study. The majority of data NIPPC relies upon was from two non-normal wind years 2009 and 2010. PacifiCorp/200, Kusters/36.

B. NIPPC's Arguments Against the Use of the Independent Wind Expert Are Unavailing.

NIPPC claims that an independent wind expert is insufficient; however, the basis for this assessment is unclear. NIPCC's initial proposal for amending Guideline 10(d) acknowledged that if a utility owned resource could prove the absence of the bias that was the basis for the adder, then no adder would apply. NIPPC/100, Monsen/3-4. In other words, if it could be shown that the wind capacity factor included in the utility-owned bid was reasonable and consistent with the wind capacity factors for competing alternatives, then presumably no adder should be applied under NIPPC's construct. But verification that the utility-owned bid's capacity factor was reasonable and consistent with the wind capacity factors for competing alternatives is precisely the function of the independent wind capacity expert. Use of the independent wind capacity expert rebuts the need for a wind capacity factor adder.

Indeed, Monsen suggests the utilities' financial incentive to overestimate wind capacity factor is the major reason for past forecasting errors. NIPPC/400, Monsen/37. The independent wind capacity expert will address this concern by confirming that the capacity factor for the benchmark and IPP bids are treated in a non-discriminatory fashion.

The overall goal of this docket should be to ensure that the competitive bidding guidelines foster the accurate and reliable evaluation and scoring of utility-owned resources and IPP bids. An independent wind capacity expert will further that purpose. Mechanical application of generic adders to utility-owned resources would have exactly the opposite impact. It would result in the application of adders to utility-owned resources that may include reasonable wind capacity factors that are comparable to wind capacity factors in competing IPP bids. This would introduce, not remove bias, and could result in the selection of higher cost bids.

Monsen appears to believe that his adder approach could complement and be used in combination with the independent wind capacity expert. NIPPC/300, Monsen/48. This makes no sense. If an 11% error rate is assumed and applied to all utility-owned resources as NIPPC suggests, what is the independent wind capacity expert verifying? If the CFE verifies that the utility-owned resource and the IPP bids reflect the same capacity factor and then applies the 11% adder to the utility-owned resource, then the adder is not removing but introducing bias. If on the other hand the CFE is not supposed to apply the adder (as would be appropriate), then NIPPC's adder serves no function. In either event, the use of adders in combination with the independent CFE either introduces bias or serves no function at all.

IX. Counterparty Risk

PGE divides counterparty risk into two categories: credit risk and other transaction specific risk. Credit risk is the risk that a counterparty will no longer be able to fulfill many or all of its contractual obligation due to insolvency or some other financial distress. PGE/100, Outama-Bettis-Mody-Hager/30-31. PGE considers credit

risk both as a threshold test that may exclude certain bids and as one of the scoring criteria for bids that survive the threshold test. *Id*/32.

Counterparty risks (other than credit risk) include the following:

- Execution Risk. This is the risk that the utility and the counterparty are unable to finalize an agreement after the bid has been included on the short list.
- Contract Modifications. This is the risk that the counterparty negotiates modifications to the template PPA. Given that the PPAs are only finalized after negotiations, contractual terms that are considered threshold for customers could have been subject to redline by the bidder. PGE/100, Outama-Bettis-Mody-Hager/33.
- Default Risk. This is the risk that the counterparty will default, either for a short duration (leading to a short-term disruption in supply) or a long duration (leading to termination of the contract). Unexpected capital additions due to environmental regulations or mechanical failure may lead to counterparty default. Counterparties will assess the financial risk of default against the cost of capital additions. If the capital addition is towards the end of the PPA term, the counterparty may decide that default is more favorable from a financial perspective. PGE/100, Outama-Bettis-Mody-Hager/29. Utilities experience both financial risk (the cost of replacement power) and physical/reliability risks (the uncertainty that supply may not be available at any price). PGE/100, Outama-Bettis-Mody-Hager/32-33.

- Force Majeure/Change of Law. This is the risk that unforeseen circumstances or changes in laws and regulations may permit the counterparty to terminate the PPA. One type of provision that is becoming more common is a "no-damages" provision that permits termination without damages if a significant, unforeseen event such as a change in environmental law or regulation occurs. *Id*/30.

A. PGE's Proposed Changes to Address Counterparty Risk

PGE proposes to address counterparty risk in the non-pricing section of its scoring matrix. In particular, PGE proposes that certain terms of the model PPA be deemed non-negotiable. PGE/200, Outama-Bettis-Mody-Hager/17. Acceptance of these terms would be a pre-condition for participating in the RFP. Non-negotiable terms could include step in rights in the event of default and approval requirements for merger or transfer of the ownership of the plant underlying the PPA. *Id.* These contract provisions address the problem that NIPPC's witness identified. *Id.*/17-18.

PGE also suggests internal guidelines for scoring bids that propose material changes to the RFP template PPA. *Id.*/18 Changes to the PPA that would lead to score adjustments could include: change in law, change in regulation, addition of conditions precedent, addition of no-fault termination clauses or conditions that alter or limit seller performance obligation, changes in events constituting force majeure events, and changes in performance assurance provisions. *Id.*

B. Response to NIPPC's Position on Counter-Party Risk

NIPPC's testimony on counterparty risk reflects its witness' experience working in the energy industry through 1999 and ignores current industry standards and practices.

Moreover, Collins' proposals would result in the elimination of significant risk protections for customers. Finally, the proposed 9% adder in favor of special purpose entities and IPPs is geared, not to ensure the accurate evaluation of benchmark and IPP bids, but to ensure that IPP bids are selected more frequently. This type of outcome-oriented approach is ill-suited to the goal of this docket, which is to improve the evaluation and analysis of benchmark and IPP bids. More troubling is that this approach, which is counter to current industry risk management best practice, will expose the utility and its customers to unmitigated risks even though there are existing mitigation tools available.

1. Commission Should Not Ignore Credit Risk of Counter-Parties

NIPPC's Reply Testimony suggests that the Commission require removal of credit risk as a scoring criterion for bid selection. NIPPC/400, Collins/2-3. This suggestion flies in the face of industry risk management best practices and common sense. All else being equal, purchasing from a higher credit rated company is less risky than purchasing from a company with a lower credit rating. PGE/200, Outama-Bettis-Mody-Hager/12. Credit risk here reflects the chance that the counterparty may default because of insolvency or other financial distress. PGE/100, Outama-Bettis-Mody-Hager/30-31. Ignoring a counterparty's credit risk would mean potentially selecting bids with counterparties that may not be financially able to meet their contractual obligations, and not being able to manage such risk exposure by requiring a letter of credit from a qualified financial institution. This would expose utility customers to unacceptable risk that is inconsistent with industry standards. PGE/200, Outama-Bettis-Mody-Hager/12.

Credit requirements are a standard part of transactions in the wholesale electricity market, including transactions executed by NIPPC members. *Id.*/13. Counterparties, including IPPs, commonly negotiate credit and collateral requirements as part of the enabling agreements necessary for purchasing and selling wholesale gas and electricity. *Id.* As a prudent risk manager, PGE employs tried and tested industry risk management tools when proposing to purchase electricity from IPPs bidding into the RFP. *Id.*/12.

Collins' suggestion that credit scoring should wait until after PPA execution is unworkable. NIPPC/400, Collins/2-3. This approach will also lead to many false starts (if negotiations terminate at the point where Collins suggests credit risk should be evaluated) and give no consideration to the timing of the utility's electricity need and reliability concerns. If the counterparty is unable to establish credit, PGE may have lost the opportunity to pursue alternative bids.

Collins makes an unsuccessful attempt to dismiss the importance of credit risk by stating that "the credit for either an IPP or a utility-owned power plant derives from the government authorized revenue stream supplied from the ratepayers." NIPPC/400, Collins/2. What this smokescreen tries to obscure is telling. Collins does not claim that special purpose entities (SPE) or IPPs have the same capital structure and leverage as utilities. Indeed, because utilities are regulated and SPEs and IPPs are not, utilities typically have an approximate 50/50 capital structure while SPEs and IPPs can be highly leveraged.

Moreover, utilities have a statutory obligation to serve and are subject to prudence review by the Commission. The Commission has no similar oversight or authority over IPPs. Thus, unlike utilities, IPPs can consider default as an option depending upon the

economics of complying with the terms of the PPA. For the utility, default is not an option; we have an obligation to serve our customers and to provide adequate service at reasonable prices. ORS 756.040.

NIPPC's Reply Testimony also complains about the alleged lack of transparency in using credit factors for entities that are not rated by one of the major rating agencies. NIPPC/400, Collins/10. This claim is unfounded. PGE's 2007 RFP includes a detailed list of the factors that are considered in completing the credit risk evaluation. PGE/200, Outama-Bettis-Mody-Hager/15; PGE Exhibit 202. These factors enable bidders that are not rated by one of the major rating agencies to satisfy the credit threshold. PGE/100, Outama-Bettis-Mody-Hager/32.

2. Credit Requirements are Not Impossible to Satisfy

Collins makes the statement that the RFP requirements are impossible for the IPPs to meet. NIPPC/400, Collins/4. This statement is contradicted by the robust participation of IPPs in PGE's RFPs and the number of IPPs that satisfy the credit requirements necessary to participate in the wholesale power markets. PGE/200, Outama-Bettis-Mody-Hager/13.

3. Default Risk is Real and Not Mitigated by Reserve Margin

Collins claims that actual damages from PPA defaults are overstated or misplaced because utilities maintain reserve margins. NIPPC/400, Collins/14-15. To provide some context, PPA defaults have two risk components: a physical component (i.e., the actual ability to acquire power to serve our customers); and financial component (i.e., the risk that the cost of the replacement power is uncertain); and. PGE/100, Outama-Bettis-Mody-Hager/32-33. Collins questions both components.

As to financial risk, she observes that the utility is better off in some cases because replacement power may be cheaper. Collins' example begs the question. No one knows when a PPA default may occur and what replacement power costs will be at that time. Default risk simply accounts for these uncertainties rather than assuming Collins' rosy scenario where PPA defaults conveniently coincide with plentiful supply of lower cost market power.

Equally important, the notion that PGE's planning reserve margin is intended to provide protection against PPA default risk is misplaced. Collins has confused the purpose of reserve margins and the goal of acquiring resources to satisfy the reserve margin. For IRP planning purposes, PGE's reserve margin consists of a 6% contingency reserve margin and an approximately 6% operating reserve margin. The operating reserve is required by regional reliability standards and meant to maintain supply stability during unexpected real time disruptions that occur within the operating hour and must be corrected within one hour's time. LC 48, Portland General Electric, 2009 Integrated Resource Plan at 43.[3] The contingency reserve covers two types of events: (1) extreme weather events and resulting load demands and (2) generator and transmission unplanned outages that extend for longer periods than the operating reserve is meant to cover. *Id.* Like other utilities, PGE acquires long-term power supply, such as PPAs, to satisfy their planning reserve. If the planning reserve is also necessary to cover PPA defaults, then the required planning reserve is too low and may not be available for its intended purpose.

[3] Official notice of PGE's 2009 IRP is appropriate given that it is a document in the files of the Commission that has been made part of the files in the regular course of business. OAR 860-001-0460(1)(d).

4. NIPPC's Proposed Options Should be Rejected

Finally, NIPPC proposes an adder of approximately 9% to be applied against the utility-owned resource. NIPPC/400, Collins/19. NIPPC's witness does not explain the justification for this adjustment other than as a means of "leveling the playing field" to adjust for "the credit benefit provided to the utilities by the ratepayers in the evaluation process." *Id.* While the details and justification for this proposal are unclear at best, it appears that the adder is designed to handicap benchmark resources because they provide the benefit of a stronger balance sheet, and therefore lower credit risk than some PPA counterparties.

This is misguided. The goal of this docket is to ensure that benchmark resource bids and IPP bids are evaluated fairly and accurately so that resources are selected that reflect the best mix of cost and risk for utility customers. The goal is not to ensure a particular outcome or guarantee that a certain percentage of selected bids are benchmark resources or IPP projects. Bids that expose utility customers to more risk should receive a lower score, all other things being equal, than a bid that exposes customer to less risk. NIPPC's proposal turns this fundamental principle on its head by penalizing bids with less risk and rewarding bids with more risk.

Collins' two other options are equally unpersuasive. She claims the utility could be required to hold its generating resources in an unregulated arm of a holding company. NIPPC/400, Collins/21. This type of broad market restructuring is well beyond the scope of this docket. The Commission has considered and rejected market restructuring in the past, and the Legislature has mandated cost-of-service options for all customers. UE 102, Order No. 99-033 (Jan. 27, 1999); ORS 757.603(1)(a). No evidence suggests accurate

and reliable methods for evaluating benchmark resources against PPA bids cannot be achieved without this type of market restructuring.

Collins' third option "would be for the utility to choose to put out an RFP with a utility-equivalent leverage limit and the same post-COD return as the regulatory compact provides. Regulated rates of return can simply be passed through by a contract that approximates utility plant treatment." NIPPC/400, Collins/21. Collins' third option appears to suggest that IPPs submit bids that are modeled on utility-ownership structure in terms of capital structure and authorized rates of return. This is not an objection or a new alternative. IPPs are currently free to structure their bids in this manner. They may elect to infuse more equity into their proposal; they are similarly provided the freedom to price their bids to incorporate an internal rate of return and cost of capital in whatever manner they see fit.

X. Conclusion

For the reasons stated above, the Commission should adopt PGE's recommendations, which are as follows:

Heat Rate Degradation: In its evaluation and scoring of competitive bids, PGE already considers the heat rate degradation for thermal benchmark resources based on the turbine manufacturer's specifications. The evidence reveals that no improvements to this approach are currently available or practical. Accordingly, PGE recommends no change in the evaluation and analysis of competitive bids for this item.

Cost Over-Runs and Under-Runs: The record reveals insufficient evidence to show bias in the evaluation process reflecting "under forecasts" of the construction cost associated with ownership proposals, including benchmark resources. PGE proposes that

benchmark bids that contain cost caps supported by third party agreements like an Engineering, Procurement & Construction agreement or an agreement with the turbine manufacturer receive a higher bid score.

Wind Capacity Factors: No evidence has been introduced to support an asymmetric, mechanical wind capacity factor adder for benchmark resource projects. PGE supports use of a qualified and independent third-party technical expert to review the expected wind capacity factor associated with each project on the initial short list, including benchmark resources. PGE/200, Outama-Bettis-Mody-Hager/10.

Counterparty Risk: PGE proposes enhancements to its current treatment of counterparty risk in the RFP scoring matrix. PGE's current approach incorporates a limited aspect of counterparty risk – primarily, credit risk – into the evaluation process. PGE proposes consideration of certain non-negotiable terms in the RFP template PPA as a method for mitigating other counter-party risk. PGE also proposes taking into account bidders' proposed changes to the RFP template PPA.

To the extent the Commission determines that further investigation into these issues is appropriate, PGE recommends that the focus of any improvement be the development of evaluation and analytic criteria designed to address each bid's individual characteristics. As the record in this docket reveals, the use of generic adders is likely to lead to bid evaluation distortions and biases. Each resource, operating environment, transaction structure, and bidder is unique.

The evaluation and analysis of bids should be both rigorous and flexible enough to assess bid characteristics and score the relevant risks, benefits, and cost of each bid.

DATED this 1st day of February, 2013

Respectfully Submitted,

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Assistant General Counsel
Portland General Electric Company

CERTIFICATE OF SERVICE

I hereby certify that I have this day caused **PORTLAND GENERAL ELECTRIC COMPANY'S PRE-HEARING BRIEF** to be served by electronic mail to those parties whose email addresses appear on the attached service list for OPUC Docket No. UM 1182.

Dated at Portland, Oregon, this 1st day of February, 2013.

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