

**THE OREGON INDEPENDENT EVALUATOR'S  
ASSESSMENT  
OF PACIFICORP'S ALL SOURCE RFP DESIGN**

PREPARED BY

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## **I. EXECUTIVE SUMMARY**

### **A. INTRODUCTION**

Boston Pacific Company, Inc. and Accion Group were chosen by the Public Utility Commission of Oregon (the Commission) to serve as the Independent Evaluator (Oregon IE) for PacifiCorp's All Source Request for Proposals (All Source RFP or the RFP). Within this scope, Boston Pacific is responsible for assessing evaluation criteria, methods and computer models including Commission Guidelines relevant to that topic. Accion is responsible for assessing the adequacy, accuracy and completeness of all solicitation materials, including the pro-forma contracts and the Guidelines relevant to that topic.

This report represents Boston Pacific's analysis of the Final Draft of the All Source RFP with regard to evaluation methods.<sup>1</sup> The purpose of this report is to identify areas of concern regarding the RFP design and to recommend areas where PacifiCorp could improve the RFP.

### **B. BACKGROUND**

When appraising the design of any competitive procurement process Boston Pacific begins with the goal of the procurement. The goal is to get the best deal possible for ratepayers in terms of price, risk, reliability and environmental performance given market and regulatory conditions. To know if a process will satisfy this goal we look to answer four key questions. These are: (a) Is the process fair and transparent? (b) Does the process properly measure and assign risk? (c) Will the process likely lead to a positive result? and (d) Is the process compliant with the Commission's regulatory rules and Bidding Guidelines?

These topics each serve an important function. First, fairness and transparency attract bidders and encourage them to bid aggressively. One cannot have competition without competitors and the more competitors the better chance the ratepayers have of getting a good deal. Second, effective risk measurement and assignment assure that the winning bids will be the bids which mitigate ratepayer risk and perform the best under a variety of possible future scenarios, that is; they are the best deal for ratepayers given the major uncertainties facing us in the future. Risk assignment also encourages bidders to assume risk, rather than pushing risk on to the ratepayers. Third, if the procurement does not produce a positive final result then the entire process will be of marginal value, as the whole purpose of the RFP is to secure the lowest risk-adjusted cost supply for ratepayers. Fourth, the process must be in line with Commission rules and Competitive Bidding Guidelines (the Guidelines) as those Guidelines represent the Commission's goals in terms of the type of supply procured and the method by which it is to be procured; goals which have been vetted extensively with all stakeholders.

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<sup>1</sup> Accion will provide their assessment in a separate report.

## C. SUMMARY

Our key findings can be broken down into several points. We group them below by our four questions concerning; (a) Fairness and Transparency, (b) Risk Measurement and Assignment, (c) Producing a Positive Result and (d) Compliance with Commission Guidelines.

### 1. Fairness and Transparency

#### **a. The chief issue affecting the fairness and transparency of the bid evaluation process is that PacifiCorp's Benchmark bids are not submitted under the same rules as all other bids.**

The chief issue with regard to the fairness and transparency of the process, and an issue that must also be addressed in the evaluation process, is the comparability of PacifiCorp's Benchmark bids to third-party bids. PacifiCorp has indicated that its Benchmarks will be submitted on a "cost of service" or "cost-plus" basis. In other words, PacifiCorp will only be estimating the cost that it will incur if it moves forward with the Benchmark proposals. Other bidders must submit binding bids which have fixed prices or use a prescribed indexing formula to vary prices over time based on changes in broad market indices such as the Consumer Price Index (CPI). Because bids by third party bidders will have fixed or fixed formula pricing, they offer lower risk to ratepayers than PacifiCorp's Benchmark bids.

Our strong preference would be to have PacifiCorp submit a binding bid just as any other third party bidder would. To do this, the Company would create an unregulated affiliate to handle all aspects of the project. The affiliate would negotiate and sign a fixed price (or fixed-formula), pay-for-performance PPA under the same terms and conditions as any other bidder. The affiliate would have no recourse to the regulated utility, so that, in the event that costs to build the plant exceeded the bid price there would be no compensation from ratepayers. This method would protect ratepayers from the chief dangers of cost-plus offers, which include: (a) "lowballed" initial cost estimates, (b) project mismanagement and (c) rising prices for construction inputs (above and beyond the allowed indices).

Our preference has elicited several objections in informal discussions. Among those objections are: (a) under this proposal the Company could earn more than its required rate of return, (b) the Company needs a cost-plus option because it has an obligation to serve ratepayers and (c) the Company's costs will be subject to a prudence review by regulators.

We find none of these arguments to be compelling reasons to allow PacifiCorp to offer a cost-plus option. First, we think ratepayers care about price, not profit. Just as if we were shopping for a car, the question isn't "How much profit will the dealer make?"

It is “What is the price of the car?” PacifiCorp’s profit margin is not relevant if it offers the best deal in terms of price, risk, reliability and environmental performance.

Second, there is no link between a cost-plus option and the Company’s obligation to serve. By carrying out this RFP process and signing a Power Purchase Agreement (PPA), Tolling Agreement, or any other contract with a third party bidder, PacifiCorp is fulfilling its obligation to serve. If PacifiCorp is worried about agreeing to a transaction with a third party, and that third party failing to deliver, we doubt that the costs for any emergency supply above the posted collateral needed to cover the loss of the bidder will be disallowed by regulators. Finally, if PacifiCorp is not willing to submit a binding bid to meet this obligation then we question why it expects third party bidders to do so.

Third, regarding prudence reviews, we believe a fair and transparent RFP which results in a pay-for-performance contract is a better way to determine prudence. While IE reviews of cost estimates and after-the-fact reviews by regulators can identify gross project mismanagement or grossly lowballed cost estimates, neither of these reviews are as effective as a fair and open RFP process which determines the optimum bid selection combined with a pay-for-performance PPA, which spells out all terms and conditions of bid payment and project operations.

An after-the-fact prudence review will struggle to answer many questions that fall into a “grey area.” For example, if PacifiCorp promises 85% availability in its Benchmark bid and in actual operation the unit is only available 80% of the time, will they be penalized for missing their target? Similarly, if PacifiCorp has to spend 5% more on capital additions than estimated, will they be penalized for those overruns? An open and fair RFP process examines all possible resource options to find the best bids in terms of price, risk, reliability and environmental performance, then codifies those bids with a pay-for-performance PPA that settles all questions of prudence by laying out terms and conditions for what payments and operating standards are pledged and what penalties, if any, will be paid under all conditions.

Another objection that we have encountered regarding prudence reviews is that a utility is subject to a more detailed cost review, and would get penalized if regulators thought that it made “too much money” on an affiliate PPA. Two points must be made here. First, the RFP itself is the key evidence for prudence; prudence is judged by whether PacifiCorp compared the full range of alternatives and made the right choice among them given the facts at the time; this is exactly what a fair and transparent RFP is designed to achieve. Second, a prudence review for pay-for-performance contracts, including that from an unregulated PacifiCorp affiliate, would not be the same as that for a cost-of-service offer; it would not be a bottoms-up after the fact accounting of costs incurred.

**b. In the event that PacifiCorp’s Benchmark bids are submitted on a cost-of-service basis some measure must be made of the additional risks these bids pose for ratepayers.**

If the Company will not agree to bidding under the same rules as third-party bidders, then the bid evaluation process will have to confront this non-comparability issue. From our perspective there are at least four ways in which we could evaluate the Company’s Benchmark bids.

First, the Company could submit a percentage “band” around its cost estimate which would serve as a cap and floor (or “collar”) on cost recovery. The Company would set the band value (e.g. 5%, 10%) and the Benchmarks would be evaluated on the highest-case scenario, that is, PacifiCorp would have its Benchmark evaluated with its prescribed upper band (5%, 10%) included.

Second, in the evaluation process, evaluators could penalize the self-build bids by adding a specified amount to their capital costs to reflect the possibility of cost overruns. For example, the Company’s bid could be indexed 50% to the CPI and 50% to the Producer Price Index – Metals (PPI), those indices would then be assumed to escalate at the 95<sup>th</sup> percentile of their expected value (i.e. a value that the market believes it will not exceed with 95% certainty based on historical data). This inflated value would be used for evaluation purposes.

A third option would be to work with PacifiCorp, regulators and interested parties to create a before-the-fact “PPA-like” document, which would set cost recovery at the bid price, define operating requirements, and spell out any penalties and all conditions for allowable charges such as cost overruns.

A fourth option would be for the Company to submit both a “best offer” bid and a “not to exceed” price, which would serve as a hard cap on cost recovery and allow evaluators to understand the risk profile inherent in the Company’s bid. The bid would be on a cost-of-service basis subject to the cap, making the offer, in effect, a “cap with no floor” offer.

**c. Aside from the comparability issue mentioned above, PacifiCorp’s RFP has several features which make it fair and transparent.**

Outside of the comparability issue, other aspects of the All Source RFP contribute nicely to fairness and transparency. For example, debt equivalence, the process by which a utility increases the cost of third-party PPAs to reflect additional capital that might be required for the Company to maintain current capitalization rates, is tabled for consideration until after the more technical analysis has been performed, per the Guidelines. We feel that this is appropriate because the debt equivalence calculation is a highly theoretical action that can unfairly bias the selection process in favor of utility self-build or Benchmark proposals. Moreover, the question of possible harm to

ratepayers via this debt equivalence issue requires a broader discussion of possible balance sheet effects from self-build and offsetting risk mitigation with third-party bids.

The use of multiple products also contributes to fairness and transparency. Because the RFP is open to base load, intermediate load and summer peak resources and because a large number of transaction types are permitted, the ability for bidders to participate is increased. The allowance for non-asset backed bids of up to five years is also a positive development, so long as the evaluation methods for these transactions are flexible enough to account for multiple ways of valuing the “option value” of shorter-term purchases (i.e. the value of being able to seek new supply every few years instead of being tied to an asset for a 20 plus-year period).

Additionally, the solicitation seeks supply for 2012 through 2016. This also adds to fairness because current market conditions include long wait times for key pieces of plant equipment. By allowing later in-service dates, bidders who have not reserved their “spot in line” for key pieces of equipment may now bid as well.

**d. To provide some clarity for bidders, the Company should state maximum quantities for selection to the initial and final shortlists.**

One area where it may be helpful to make the RFP more transparent is the quantifications for selection to the initial and final shortlists. The RFP states that PacifiCorp will consider the top bids in each category (base load, intermediate load, and summer peak) for movement onto the initial shortlist but does not provide any further elaboration concerning how it will define a top bid. There is no real indication as to the size of the final shortlist either, though it will obviously be smaller than the initial shortlist.

We think that it would be useful to provide a slightly more concrete definition of the amount to be selected to each shortlist. This will give bidders some sort of indication as to what selection to each of these lists means. For instance, if the final shortlist contained only a few bids, then bidders would know that they stood a good chance of being selected whereas if the final shortlist is expansive then their chances for selection are not as good.

We understand that PacifiCorp will likely want to keep some mystery about the total number and quantity of bids on each shortlist in order to keep pushing bidders to make competitive offers. Therefore we think a good compromise would be to set a simple cap on the quantity of MW taken for each list with enough space under the cap to allow the Company some flexibility in making their selections. We would recommend that: (a) the initial shortlist be comprised of resources that, in total, add up to no more than two times the maximum acquisition from this RFP (i.e. 2\*2,000 MW or 4,000 MW) and (b) the quantity of bids selected to the final shortlist be no more than 1.5 times the maximum acquisition from the RFP.

## 2. Risk Measurement and Assignment

- a. **The RFP employs a sophisticated bid evaluation process which recognizes the uncertain nature of the future and attempts to identify a robust portfolio of winning bids which perform well under a wide range of regulatory and market conditions.**

The evaluation methods in the RFP are documented in two ways. First, they are spelled out in the RFP document itself. The document explains which models will be used to evaluate bids and how the bids will be scored. Second the evaluation process is linked to the Company's Integrated Resource Planning (IRP) process. The IRP process review means that third parties have had a chance to review and comment upon the Company's evaluation methods.

Any evaluation method must address the uncertainties of the future and incorporate those uncertainties into the selection process. Today, key factors that will affect energy costs in the future include gas prices, CO<sub>2</sub> emissions regulations, construction costs, and the development of new technologies. The evaluation process must (a) acknowledge that there is no one "correct" path for any of these variables and (b) credit the bidder who, through their bid design, is able to protect ratepayers with regard to these and other risks.

Overall, the All Source RFP does an excellent job of addressing risk. It uses both single-path "scenario" and multi-path "stochastic" analyses to value bids under a variety of changes in key variables such as; gas prices, emissions costs, wholesale market prices, demand, hydroelectric generation, and thermal outages. It then dictates making bid selections on the basis of "Risk-adjusted" Present Value of Revenue Requirements (PVRR, a measure of ratepayers costs), an effective metric which incorporates all the risks mentioned above. This assures that the bids selected will be "robust", that is, they will perform well under a variety of circumstances. This emphasis on risk is important not only because we do not know what the future holds but also because it incents bidders to manage risk and remove risks from ratepayers.

While many major risks are accounted for, there are two other minor risks that could be more thoroughly recognized and valued in the evaluation process. These risks are transmission cost risk and capital cost risk. Our hope is that, at a minimum, PacifiCorp will conduct some simple scenario analyses to determine whether changes in these variables will have any effect on the selection of winning bids. A third risk, the risk of selling power off-system should also be examined.

### 3. Producing a Positive Result

- a. Based on our observations of bidder participation levels in this and other PacifiCorp RFPs, we are concerned that the All Source RFP will not draw a large and diverse pool of bidders.**

From our work in the 2012 RFP and from the pre-bid conferences and workshops for this RFP we note that there appears to be a decreasing trend in bidder participation in PacifiCorp RFPs. For example, the 2003A RFP for peaking capacity reportedly resulted in 79 individual bids (though likely fewer *bidders* as some bidders likely offered multiple bids). The 2012 RFP (an RFP for baseload, as opposed to peaking capacity) resulted in fewer bids. Attendance at pre-bid events has not led us to believe that this trend will reverse itself. This is a worrisome trend because there can be no competition without competitors, and the more competitors the better chance there is of a deal that will benefit ratepayers. Neither we, nor any of the other parties involved in the RFP design process, want to go through the work of conducting an RFP, only to get a scant few bids.

PacifiCorp has e-mailed a large group of bidders concerning the RFP filing and the recent bidder events, but response, to our knowledge, has not been substantial. Since bidder participation is such an important issue we would recommend that PacifiCorp redouble its efforts to publicize and promote the RFP, including efforts to contact bidders to let them know about, at a minimum; (a) the wide range of products up for bid, (b) the wide range of available transaction types permitted, (c) the capital cost indexing being allowed and (d) the fair and transparent evaluation process. If the Company decides to bid under the same terms as a third party bidder, then that fact should also be communicated. This contact could include; e-mails, press releases, articles in trade publications and other news outlets, and possibly direct phone calls.

In the process of informing bidders about the RFP opportunity we would also suggest that the Company request feedback from bidders who will not participate, and the reasons for not participating. This feedback is crucial because it will let the all parties know if there are any factors in the RFP design that can be changed to allow for more participation.

- b. Increasing capital costs necessitate comment from bidders on the feasibility of PacifiCorp's bid price indexing rules and flexibility in accepting creative proposals for capital cost control.**

Based on our experience, one concern that *may* be decreasing participation is the RFP's capital cost indexing methodology. Bidders must, as mentioned above, submit binding bids into the RFP. However, because of rising construction costs, PacifiCorp allows capital costs for new asset construction to be tied to changes in broad market indices. Currently, bidders utilizing new assets either for an APSA, a Tolling Agreement, or a PPA, may, under the RFP, index up to 40% of their capital cost payments to the Consumer Price Index and the Producer Price Index – Metals. We think this is a fair and effective way of dealing with the problem of rising costs. While we would like to see

bidders offer 100% fixed prices we understand that rising cost trends make this a less than feasible option.

However, given our recent contact with bidders we are concerned as to whether even this 40% indexing option is enough for bidders to submit binding bids. Market participants have stated that some pieces of equipment are increasing in cost at rates much faster than the named indices. While we want some form of cost control, the concern is that this requirement will keep bidders from participating in the RFP. We do not, however, want to move to a completely cost-plus situation and expose the ratepayers entirely to cost escalations. Therefore, we would appreciate receiving input from potential bidders as to what extent and type of capital cost indexing they would be willing to place a binding bid under.

We also think that it is important that PacifiCorp be open to creative proposals offered by bidders to handle rising costs. These proposals could include anything from “bands” of permitted cost fluctuation to a “not-to-exceed” price ceiling to differing indices such as the yield on U.S. Treasury bills, indices from the Bureau of Labor Statistics (e.g. the BHVY - Other Heavy Construction index) or the Handy Whitman Index of Public Utility Construction Costs.

#### **4. Compliance with Commission Guidelines**

- a. The level of Front Office Transactions should not be changed from the 2007 IRP unless bid results indicate that it would be appropriate to do so.**

Staff’s initial comments find, in part, that the RFP does not align with the 2007 IRP and the Guidelines with regard to diversity in resource duration, specifically, with regard to the amount of short-term purchases or Front Office Transactions (FOT) acquired. This is important, because alignment with the IRP and the Guidelines are two key standards of RFP review for the Commission.

Staff reaches their conclusion by citing differing forecasts of FOT acquisition presented by the Company in the 2007 IRP and in response to Staff data requests. Staff also points to another data request response which contemplates replacing FOT with resources procured in the RFP. Staff did not see any reason for departing from the FOT quantities identified in the 2007 IRP.

Certainly there are questions as to how demand will be filled and what mix of resources will fill it. In its 2007 IRP PacifiCorp showed, for example, 652 MW of FOT for the year 2012. In response to Staff’s data request number 20, the Company presents a new modeling run with 915 MW of FOT in the same year.

With regard to this issue we have two major observations. First, Staff does not currently question the Company’s updated load forecasts. Staff notes that they have not had a chance to review these forecasts, but that they are “more in line with actual growth

reported by PacifiCorp for recent periods.” If we can generally accept the load forecasts, and the IE has no reason not to at this point, then the question we must answer is not *how much* supply is needed but what the proper mix is of FOT and other longer-term resources.

Second, the RFP will not solicit any product comparable to FOT. This is because FOT are purchased on an annual forward basis, not four years ahead of time. Since the FOT need identified in the RFP will not be “put up for bid” via this RFP there is no immediate need to deviate from the FOT quantities identified in the IRP. Therefore, in terms of longer-term thermal resource acquisition need, we side with the Staff’s calculation of between 1,119 MW and 2,067 MW from 2012 to 2016, respectively.

We would like to add one point to this debate, however. The point is that the actual split between short-term FOT and longer-term supply resources should be informed by the results of the RFP, as required by the Commission. While no FOT will be solicited through the RFP, all bids will be compared to a form of FOT (PacifiCorp’s forward price curve) in the initial price screen and FOT will be a resource option in the Company’s CEM modeling. If there are many bids below the forward price curve or the CEM model picks more thermal supply resources, PacifiCorp may want to consider acquiring relatively more longer-term resources. If, on the other hand, most bids fare poorly when compared to the forward curve and are not selected by the CEM model when compared to FOT, then the Company may want to scale back its acquisition of longer-term resources in this RFP.

**b. PacifiCorp must submit a Benchmark score to be compliant with Commission Guidelines.**

In the Commission’s Competitive Bidding Guidelines, Guideline 7 requests that review and comment should focus on (1) the alignment of the RFP with the IRP, (2) whether the RFP satisfies the Commission’s Competitive Bidding Guidelines and (3) the overall fairness of the utility’s bidding process.

We have discussed the overall fairness of the RFP and our reading of the IRP/RFP alignment above. In terms of satisfying the Guidelines we find that the RFP to be generally satisfactory.

The one area where we have a potential concern is Guideline #8, which requires the utility to submit a detailed score for any Benchmark Resource prior to the opening of bidding. In the 2012 RFP an issue arose because the Company claimed it could not provide an initial price score for the Benchmarks due to their Code of Conduct. PacifiCorp now seems to say that “a process could readily be designed” to solve this problem. We would hope that the Company can comply with this Guideline as it gives evaluators another important “data point” to use in their decision. We have previously suggested having a separate person or team to perform the Benchmark scoring to avoid Code of Conduct issues. This may cause some difficulty with non-price scoring, since that is a matter of judgment, but the price scoring process should be unchanged. Having

a different person or team score the non-price factors should not be a major issue, as the Benchmarks move on for final shortlist consideration regardless of non-price score and the evaluation team will consider the non-price aspects of all bids in the final shortlist decision.

## **II. KEY CRITERIA OF RFP EVALUATION**

Before moving into a review of the specifics of the All Source RFP we think it is important to lay out our basic framework for evaluating any competitive procurement so the Commission will understand how we arrived at our conclusions. Our starting point in reviewing any RFP is the basic premise that the purpose of any competitive solicitation should be to get the best deal possible for ratepayers in terms of price, risk, reliability, and environmental performance, given current market and regulatory conditions. In evaluating whether or not the RFP in question will lead to this goal we have found it helpful to focus on four key questions: (a) Is the process fair and transparent? (b) Does the process properly measure and assign risk? (c) Will the process likely lead to a positive result? and (d) Is the process compliant with the Commissions' regulatory rules and guidelines?

Following is a brief primer as to why these questions are important and some ways in which to achieve positive answers to these questions.

### **A. FAIRNESS AND TRANSPARENCY**

#### **Why is it important?**

To achieve a positive outcome for ratepayers the methods of bid and Benchmark evaluation must be fair and transparent to all. Fairness, simply put, means that all parties are treated equally. This includes not only third party bids, but also utility Benchmark or self-build options. Transparency means that all parties can understand the RFP requirements and evaluation methods. Only if fairness and transparency are present will a large number of competing power suppliers participate and bid aggressively. This participation increases the chances of receiving a quality offer for ratepayers.

Fairness and transparency attract bidders for several reasons. First, because a solicitation is "fair" bidders know that their bid will be considered on equal footing with other bids, they do not have to worry about their bid losing out to an inferior offer. Second, because a process is transparent bidders know exactly what is being solicited and how bids will be evaluated. When bidders know that no special privilege will be granted to any bidder and evaluation criteria are laid out clearly they know that aggressive bidding is the only way to ensure that they win the RFP.

Fairness and transparency also benefit ratepayers. The more bidders, bidding aggressively, that are in the RFP, the better chance the ratepayers have of receiving a quality offer. Transparency also has the added benefit of letting the ratepayers know just how the winning bids were chosen. Too often, procurements are criticized as being a “black box” from which winning bids seem to just emerge. With a transparent method, any third party can understand just how the winning bids were chosen.

Fairness and transparency are such important concepts that they are featured in both Commission and Federal Energy Regulatory Commission (FERC) Guidelines. The Commission emphasized fairness and transparency in 2006 when setting guidelines for competitive bidding.<sup>2</sup> Two of the five goals that the Commission confirmed for competitive bidding are worth noting in this regard. The first goal expresses the need to get the best deal for ratepayers – “Provide the opportunity to minimize long-term energy costs, subject to economic, legal, and institutional constraints.”<sup>3</sup> The fifth and last goal simply states that the solicitation should be “understandable and fair”; words which we see as the equivalent of fair and transparent.<sup>4</sup>

The FERC also emphasized fairness and transparency in a 2004 Order<sup>5</sup> in which it set out the standards for competitive solicitations that would be used to justify a utility’s long-term purchase of power from an affiliate. The FERC stated:

The fundamental objective of the solicitation guidelines is that the affiliate should have no undue advantage over non-affiliates in the solicitation process. Adhering to the guidelines will ensure that wholesale customers receive the benefit of the marketplace, including an unbiased assessment of the full range of choices, whether the soliciting utility provides service at cost- or market-based rates.

The solicitation guidelines have four principles:

- a. Transparency: The competitive solicitation process should be open and fair.
- b. Definition: The product or products sought through the competitive solicitation should be precisely defined.
- c. Evaluation: Evaluation criteria should be standardized and applied equally to all bids and bidders.
- d. Oversight: An independent third party should design the solicitation, administer bidding, and evaluate bids prior to the company’s selection.<sup>6</sup>

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<sup>2</sup> Order No. 06-446.

<sup>3</sup> Order No. 06-446, at page 2.

<sup>4</sup> Ibid., at page 2.

<sup>5</sup> 108 FERC ¶61,081 (Opinion No. 473 dated July 29, 2004).

<sup>6</sup> 108 FERC ¶61,081 (Opinion No. 473 dated July 29, 2004) at page 25 ¶69 and 70.

## **How do we achieve it?**

There is no single right way to solicit power and, therefore, there is no single right way to achieve fairness and transparency. In general, a fair and transparent process would involve three items; (a) all parties bidding under the same terms, (b) a precisely defined product, and (c) a price only or “price mostly” evaluation. The point of these conditions is to make sure that all bidders understand what they are bidding for and how they will be evaluated and that the winner will simply be the bidder who offers the best deal for ratepayers in terms of cost and risk.

An example of these principles in action can be seen in the full requirements solicitations for Standard Offer or Basic Generation Service in PJM. The product for these auctions is precisely defined as full requirements supply which, in essence, makes each supplier responsible for serving a percentage share of the energy, capacity, and ancillary service needs of a ratepayer class. Bidders offer an amount of supply at a stated price. The winners are simply the bidders who offer to supply at the lowest cost. All bidders, including the utility affiliate, are treated in the same manner and sign the same contracts.

These solicitations are not without their critics. The most important criticism, to our minds, is the claim that the contract lengths (typically three years for residential service) are not sufficient to justify new capacity additions, especially those (a) with long lead times, (b) that are capital intensive, and (c) that are new (not fully commercialized) technologies. Still, these price-only solicitations have substantial value, particularly when it comes to fairness and transparency.

This is not meant to suggest that PacifiCorp must conduct a full-requirements type of solicitation, only to provide a real-world demonstration of fairness and transparency. We feel that it is important for parties to understand that these are more than just “principles” but standards that are achievable in the real world.

## **B. MEASURING AND ASSIGNING RISK**

### **Why is it important?**

In reviewing evaluation design for RFPs we look for an evaluation process which, to the best extent possible, recognizes the uncertain nature of the future, that the only thing certain is uncertainty. Today, future values of variables such as gas prices, emissions regulations, and construction cost escalations are unknown. Yet these variables will have a great impact on future ratepayer costs. The impact of new technology could also greatly affect the choice and cost of future supply.

If the exact paths of these variables were known, the selection of new resources would be relatively easy. In reality, there are no certainties about the future, which

makes the evaluation process much more complex. The best evaluation process is one which acknowledges the risks that ratepayers face, and incorporates an analysis of those risks into the selection of bids which perform well under many different future scenarios.

The RFP, then, must do two things to take account of risk. First, the evaluation methods must recognize and measure risk. Second, bids must be credited to the extent that they assign risk away from the ratepayers and onto parties better equipped to manage risk.

This focus also assists ratepayers because, if the evaluation clearly accounts for risk, then credit can be given to the bidders who act to shield ratepayers from risk and the lowest-risk bids can be identified. It also encourages innovative risk management. If bidders know that they will stand a greater chance to win, all things being equal, by removing risks from the ratepayer, then they will be encouraged to come up with ways to remove or hedge risk.

### **How do we achieve it?**

To find the best deal for Oregon ratepayers, risks must be accurately measured in the evaluation process. There are two chief ways to handle this task. One way is to assign each bidder the same risk profile through a tightly defined product, process, and a contract which holds all bidders to the same risk assignment standards. The second is to review the key risks inherent in each bid and attempt to value each of them separately.

The former method is used in the previously-mentioned full requirements solicitations in areas like New Jersey and Delaware. In these procurements all bidders, including utility affiliates, bid by the same rules for the same product and are qualified under the same standards. Winners in these procurements must sign a standardized contract to supply a standard product.

Because this RFP will entertain offers for base load, intermediate load and summer peak supply and because different technology types and transaction types are solicited evaluators must go through the more labor intensive process of attempting to measure each risk that the ratepayers face.

One effective way to quantify the risks presented by each bid is to model what ratepayers would have to pay for each bid based on changes in key variables. This sort of modeling can take two basic forms, “scenario” modeling or “stochastic” modeling.

Scenario modeling represents a “what if?” view of the future. In other words, it examines a single “path” for a given variable and reports what ratepayers would pay given that scenario. It is fairly useful for examining simple questions like “what would ratepayers pay if gas prices rose 10%?” Scenario modeling falls short as a full bid evaluation solution however, due to a few problems. First and foremost, it is difficult to interpret and act on the results of scenario modeling. Say, for instance, that, in answer to our question about gas prices we learn that gas plants would be expensive. How do we

then act on this result? We can't because we have no idea of what the likelihood is of that rise in gas prices occurring. This points to another problem with scenario analyses in that there is no risk metric associated with the analyses. We can't understand how risky a bid is just by looking at a single-path result.

Stochastic modeling presents a solution to these problems. This type of modeling involves essentially creating multiple "paths" for each variable, basically hundreds of scenario runs at once. The stochastic analyses changes the evaluation question from "what if?" to "what might be?" by estimating ratepayer costs over so many possible futures. At the end of the exercise each bid or portfolio of bids will present a range of results. From this range we can get both an average or expected value of the bid as well as a risk metric such as standard deviation. Not only do we now have a risk metric, but we also have an actionable result because we can compare the expected price and risk profile of one bid to another. To borrow our example above, instead of asking what happens when gas prices go up we now know how a bid performs when tested against a full range of gas prices and what range of costs that bid could produce.

It's important to note that the path movements in the stochastic analysis are not "random" per se but vary according to historical data. Thus, for example, gas prices move with the same volatility that would be expected in the future given past market history. The idea is to, as closely as possible, simulate the actual movement of prices.

The ultimate goal of these exercises is to compare bids with different risk profiles. For example, if one bidder offered a low capacity price and a fluctuating energy price and another offered a higher capacity price and a fixed energy price, how would we choose between these bids? If we value these bids with the stochastic method against a range of fuel prices then we would be able to understand and calculate the value of the second bidder's fixed energy price.

This comparison is key because the nature and extent of risk varies across technologies and transaction types. For example, for coal-fired technologies the greater risks are linked to capital costs and environmental regulations. In contrast, for natural gas, fuel price risk is the more prominent risk. Similarly a fixed price pay-for-performance power purchase agreement puts all risks on the bidder, while a cost-plus transaction puts the cost burden on the ratepayer.

### **C. LEADING TO A POSITIVE RESULT**

In reviewing and conducting an RFP, it is always important to keep the end goal in mind, the acquisition of the best deal for ratepayers in terms of risk, reliability, price, and environmental performance, given market conditions. The above prescriptions should aid in that goal, but they do not guarantee it. If, for example, a bidding requirement disqualifies a wide selection of potential participants, then the likelihood of a good result is lower. With this in mind we also review an RFP with an eye toward items which, while not necessarily unfair, could still affect the participation levels in the RFP.

It is worth noting that there are times when the goal of a positive result could come into conflict with the other goals mentioned above. For example, a bidder could present an offer that is attractive, but features a non-fixed (or indicative) price. At this point, it is up to the evaluators to decide whether allowing this bid to be evaluated is appropriate given the fact that other bidders have conformed to the requirement to submit a binding bid. In these cases Boston Pacific views part of the IE's job as providing advice on moving forward in the best interests of ratepayers.

#### **D. COMPLYING WITH COMMISSION RULES AND GUIDELINES**

A final topic that we review is compliance with appropriate Commission regulatory rules and guidelines. These are usually in line with the goals of fairness and transparency and, of course, are geared toward producing a positive result. We cannot, however, simply ignore rules and guidelines because they represent the will of regulators and the ratepayers, having been vetted through a public comment process.

An excellent example of rules that can't be ignored and might possibly conflict with other analyses are Renewable Portfolio Standards (RPS). It is certainly possible, for example, that RPS requirements could call into question the acquisition of certain resource types, even through those resources may be otherwise relatively low cost and low risk. RPS requirements represent a priority from rulemakers, and ratepayers, for renewable supply, and the winning bids must reflect that priority.

### **III. DETAILED DISCUSSION OF PACIFICORP'S ALL SOURCE RFP**

The following is a specific review of the RFP. The review is focused on our four evaluation criteria; (a) fairness and transparency, (b) risk measurement and assignment, (c) producing a positive result and (d) compliance with appropriate Commission guidelines.

#### **A. FAIRNESS AND TRANSPARENCY**

Recall that fairness, in our definition, simply means that all bidders are treated the same. Above we established why the issue of fairness is important in RFP design. All bidders want to know that they are competing on a proverbial "level playing field," that they can win the RFP by offering the best deal in terms of price and risk allocation. Transparency means that all parties can clearly understand the RFP requirements, products solicited and evaluation methods.

**The major problem in the RFP with regard to fairness and transparency is that PacifiCorp's Benchmarks will not bid under the same rules as third parties.**

Fairness is an especially important issue in procurements where the evaluating utility is also offering a Benchmark or self build option because of the potential conflicts of interest. The utility is both creating a bid and evaluating all bids to find the best choice for ratepayers, which may not be its own offer.

In this RFP, the Company will submit a group of Benchmarks, they are:

- A second gas-fired combined cycle block of 535 MW to 700 MW in capacity at the Company's Current Creek Plant
- A second gas-fired combined cycle block of 550 MW to 580 MW in capacity at the Company's Lake Side Plant
- Three to seven simple-cycle gas turbines at one or more locations in the PacifiCorp system. Each turbine will range from 250 MW to 290 MW in capacity

The Company will first submit "a detailed evaluation for each Benchmark Resource(s) with supporting cost information, to the Oregon Commission and the IEs prior to the opening of the proposals submitted by bidders". The IE will complete the evaluation of the Benchmarks before the third party bids are opened. The Benchmarks will be evaluated using the same assumptions and evaluation tools as third party bids but will be offered only on a "cost-of-service" basis unlike the fixed (or fixed-formula) bids from third party bidders. Specifically, PacifiCorp states that "the Company does not intend for the Benchmarks to be treated like third-party bids for purposes of subsequent ratemaking treatment."

PacifiCorp's willingness to evaluate all bids and Benchmarks with the same assumptions and evaluation tools is a positive step. However, the fact that Company bids will not be binding, and thus, not truly comparable to third party bids, undermines much of the comparison. As it stands the Company's bids will be reviewed by the IE, but when the time comes for the ratepayers to actually be charged, the charges will be whatever is incurred to construct the facilities (subject to a prudence review by regulators).

**Cost-plus bids are inferior to fixed or fixed-formula bids because they shift the risk of cost overruns and mismanaged operations to the ratepayers, who are unequipped to do anything about them.**

The essential problem with cost-of-service bids is that they shift the risk of both capital and operating cost overruns from the supplier to the ratepayers. This means that ratepayers are exposed to several dangers that would not be present in a fixed-price/fixed-formula PPA bid. For example:

- The initial bid is “lowballed” by omitting certain items (e.g. funds for interest during construction, non-Engineering Procurement Construction (EPC) related “soft costs”) and beats out more competitive offers in the evaluation, even though ratepayers end up paying for all costs
- The bidder mismanages the project and incurs cost overruns
- The bidder makes an honest effort to correctly estimate its cost and runs the project reasonably well, but does not accurately predict costs
- The bidder does not live up to the same performance standards that a PPA would, for example, the plant is not available as often as a PPA would pledge

A fixed-price, pay-for-performance PPA fixes these sorts of problems by laying out specifics of the project before the fact. It states just what the bidder will be paid and what the bidder must do in exchange for that payment in terms of asset construction and operation. In this way, the risks of cost overruns and project mismanagement reside with the supplier, who has a much better ability to manage these risks than ratepayers. Furthermore, because the payment is fixed, the supplier has the incentive to perform efficiently, as they can expand their profit margins by operating in an efficient manner.

**We do not find any compelling reason which requires PacifiCorp to bid on a cost of service basis.**

In informal discussions we have heard several reasons as to why a utility must be able to submit a cost-of-service bid while third parties may not. Some of the key justifications we have encountered are: (a) a utility is regulated and only allowed a certain return on investment, a fixed bid might permit them to earn more than their allotted return, (b) a utility has a duty to serve ratepayers while third parties may either walk away during facility construction or not bid at all and (c) utility costs are subject to prudence reviews by regulators.

We fail to see any of these arguments as being reason for ratepayers to accept the risks posed by cost-of-service bids. Take the first argument; a utility cannot earn more than its allotted return. Assuming the utility was victorious in a competitive process and offered the best deal for ratepayers, we doubt very much that ratepayers would care if the company was earning 10% or 12% return on their investment, the benefits to the ratepayers would be the same either way. When shopping for any consumer good, be it a car, a computer, or a jug of milk, our concern about the cost and performance of the item far outweighs any interest in the seller’s profit margin. To put it bluntly, we care “how much will it cost me?” not “how much did it cost them?” If the utility earns more than its standard return it will be because they effectively managed the project. Certainly having the utility (or a utility affiliate) operate on a pay-for-performance basis is not an impossible task, as has been plainly demonstrated in, among other places, the Standard Offer or Basic Generation Service solicitations in PJM. If the real concern is that the utility will somehow be able to get away with a higher bid than it would offer otherwise, we would mention that a goal of the RFP is to attract a large and diverse pool of bidders. It is the competitive pressure from these bidders which will keep the utility’s offer honest

and ensure that the ratepayers are not stuck with an expensive resource relative to current market conditions.

A duty to serve simply means that the utility is required to supply its ratepayers with energy and capacity; when they flip a switch, the lights have to come on. A duty to serve has no direct link with a cost-plus resource. Merely by conducting this RFP and signing an agreement with a third party bidder, PacifiCorp will have fulfilled its duty to serve. Furthermore, the remedies to the problems that utilities point to are not necessarily linked to a cost-plus-option. For example, if a third party bidder does walk from the deal, assuming the utility behaved properly in selecting the supplier in the first place and in obtaining replacement supply, does the utility believe that regulators will *not* allow them to recover costs incurred while obtaining a replacement solution? Alternately, if the utility wins and market conditions changed so dramatically, that it would be cheaper to supply ratepayers from purchases instead of completing new construction, couldn't the utility ask regulators for permission to do so? Finally, if the utility believes that it needs a cost-plus option because, *but for* its duty to serve it would not be able to submit a binding bid into the RFP, then why and how does it expect third party bidders to do so?

With regard to prudence and other regulatory reviews, the best way, in our opinion, to determine prudence, is a fair and transparent RFP which results in a pay-for-performance contract. A review by the IE and a prudence review by the Commission will provide some remedy in situations where the utility leaves key cost components out of its bid or grossly mismanages the project. However these review methods are not as well equipped to pass judgment in "grey areas." For example, if the Company spends \$10 million more on capital additions than estimated to keep the unit running, will it be able to recover those costs? If the Company promises an 85% availability factor and is only available 80% of the time, will it have to pay penalties? If the Company estimates, based on a price quote from a respected source, that a piece of equipment will cost \$50 million and the actual cost is \$60 million, will it be able to recover the extra cost?

The last hypothetical situation is especially troubling because the current construction environment is characterized by rising costs for everything from labor to raw materials. It is rather difficult to find hard prices for certain items, and the price increases for certain pieces of equipment do not necessarily track with the inflation indexes that the Company will allow the bidders to use. The Company could submit an indicative bid that includes all major cost components, run the construction process acceptably, and still end up with a cost that is significantly higher than what it proposed. A third party supplier who found itself in such a situation would have to suffer the consequences, to the benefit of ratepayers.

These hypothetical questions are difficult questions and answering them in an after-the-fact prudence review could be quite contentious. An open and fair RFP resulting in a pay-for-performance PPA makes a before-the-fact prudence determination. The RFP examines all available options for supply and picks the bids with the best combination of price, risk, reliability and environmental performance while the PPA can

precisely define payment parameters and operating requirements as well as what will happen if bidders do not live up to those requirements and parameters.

One other objection we have encountered concerning prudence reviews is that a utility would get penalized if regulators thought that it made “too much money” on an affiliate PPA. In other words, even if regulators allowed a fixed bid from the utility with a pay-for-performance type of recovery there is still the danger that regulators would take a bottoms-up look at utility costs, determine that the utility was making too much profit, and take back some of that profit.

Beyond our initial points above about profit margin we can add two further points. First, the RFP process itself is the key evidence for prudence. In our opinion prudence is judged by whether PacifiCorp compared the full range of alternatives and made the right choice among them given the facts at the time. The RFP process does exactly this. Second, a prudence review for pay-for-performance contracts, including that from an unregulated PacifiCorp affiliate, would not be the same as that for a cost-of-service offer. Having been judged prudent because of its acquisition in a fair and transparent RFP process there would be less need for a bottoms-up, after-the-fact cost review as the bidder (or utility affiliate) would be paid based on the contract it agreed to.

**If the Company will not agree to bid on comparable terms to a third party bidder then some methods must be created to assess the extra risks that Company bids pose for ratepayers.**

As stated above, our strong preference would be that PacifiCorp bids as any bidder and is held to its offer. The Company could do this by creating an affiliate who would construct the Benchmarks. The affiliate would be related to PacifiCorp’s parent company and would have no recourse to ratepayers if actual costs exceeded its bid. It would sign a fixed price, pay-for-performance PPA with the utility with the same terms and conditions as other bidders.

Despite this, based on previous discussions with the Company and regulators we understand that the Company will likely not change its stance on the conditions for its Benchmark offers. Therefore, we feel that it may be constructive to offer some proposed solutions to estimate the increased risks that the Benchmarks pose to ratepayers.

We can start by suggesting four basic solutions which could help protect ratepayers and may be agreeable to PacifiCorp. The first solution is to “band” or collar the Benchmark capital costs at a rate suggested by the Company. The Company would submit its bid price along with a band number, and the bid would be evaluated at the highest possible cost. For example, if the Company’s bid estimate was \$500 million and its band was 10% the Company would be eligible to recover no more than \$550 million and no less than \$450 million of its costs. The bid would be evaluated as a fixed bid costing \$550 million and cost recovery would be based on cost of service, subject to the band noted above.

Another solution is more technical. Evaluators would assume that PacifiCorp's bid is implicitly tied in a 50/50 split to the indices that it allows bidders to use, the Consumer Price Index and Producer Price Index- metals. Based on the current position and past volatility of the indices evaluators could generate a 95<sup>th</sup> percentile range value for these indices. For example, if the PPI and CPI were at 150 we could say, looking at the current value and past volatility, that in the next two years we are 95% certain that they will go no higher than 180 (i.e. a 20% increase). PacifiCorp's Benchmarks would then have their capital costs escalated by 20% to account for the risk of cost escalation. The bids would be evaluated on this escalated cost. We are open to using different indices, splits and confidence intervals, but the general point is that some "stress test" of potential capital costs should be made.

A third solution would be to have the Company sit down with regulators and interested parties and create a "PPA-like" document regarding cost recovery and operating conditions for the Company bids. The Company's bids would be evaluated at their bid price and cost recovery would also be set at the bid price. The PPA-like document would spell out any conditions which would allow the Company to recover more than its bid estimate as well as any penalties for not meeting operating targets.

A fourth solution would be for PacifiCorp to submit, in addition to its Benchmark bids, a "ceiling" bid that will be completely binding, creating, essentially a "cap and no floor" situation. This would give the evaluators a chance to better understand the limits of potential cost overruns should the bid be selected. The bid could initially be evaluated on the "best guess" cost but would also be analyzed under this "upper cap" offer to see the potential impact of cost overruns. If selected, the Company's project would be paid at cost-plus, subject to this cap.

**In other aspects apart from the cost treatment of the Benchmark bids, such as the treatment of debt equivalence and the allowance for multiple in-service dates, the RFP represents a fair and transparent offer for all parties.**

In aspects beyond the comparability of the Benchmark bids, the RFP represents a fair and transparent offer for all parties. Two items stand out as worthy of special mention. First, bidders are allowed to propose multiple in-service dates for their resources. Specifically, resources must be available for dispatch or scheduling by June 1, 2012, or June 1 of the years 2013 to 2016. This is a good suggestion given the current construction environment, which includes long wait times for various pieces of equipment. Currently the wait for items like steam turbines can stretch out over more than two years. If in-service dates were set too soon then the only companies that could participate would be those who had or could quickly obtain a place "in line" for equipment. By stretching out delivery times, PacifiCorp allows for all bidders to put together a quality offer.

Another issue in which the RFP is quite fair is the subject of debt equivalence. Debt equivalence is a controversial and complicated topic. The driving force behind the debt equivalence issue is the view of some bond rating agencies that agreements such as

PPAs and Tolling Agreements are the functional equivalent of debt. Some of the rating agencies calculate the portion of the PPA or Tolling Agreement capacity payments that might be judged to be a debt equivalent and add this *hypothetical* debt to the utility's balance sheet.

The legitimate concern on the utilities part is that the hypothetical debt on its balance sheet could lead to a bond rating downgrade. That downgrade would have the potential to harm ratepayers because it could mean that the utility has to pay higher interest rates, which would be reflected in rates charge to ratepayers.

Because of this fear, a utility will often calculate the amount of equity that would have to be added to its hypothetical balance sheet to restore the desired debt equity split. For example, say a utility had has a total of \$100 of financing (capitalization), with 50% from debt and 50% from equity. Assume that the utility is considering a PPA which, according to a bond rating agency, would add \$10 in hypothetical debt to the balance sheet. The utility would include, as part of the bid evaluation, the cost to restore it's capitalization to a 50/50 split. In this case it would add the cost of \$5 of new equity, which would, in theory be used to pay down \$5 in debt, to maintain the 50/50 split in the eyes of the ratings agency.

On the real balance sheet, however, there is \$55 of real equity and \$45 of real debt. The utility replaced \$5 of real debt with \$5 of real equity on its balance sheet. The resulting real split between debt and equity is 45% debt and 55% equity. Since equity costs more than debt, ratepayers would end up paying more in rates if this real split between debt and equity is reflected in rates. The reason equity costs more is that equity is a riskier investment because equity returns are paid only after debt is paid and, equally important, the utility must pay income taxes on equity.

One of the concerns with debt equivalence is that by adding on additional costs to third-party bids it unfairly skews the RFP process in favor of utility self-build bids, despite the fact that the utility can be in danger of a downgrade through its own investment programs as well. Another concern is that the utilities cost of additional equity is a hypothetical calculation as well, the utility typically makes no promise to specifically go out can get equity to restore its capitalization.

The RFP, per Guideline 9c, leaves the debt equivalence issue out of the evaluation process and incorporates it as a potential part of the post final-shortlist considerations. It also gives the Commission the power to request PacifiCorp to obtain an advisory opinion from a rating agency if it wishes to substantiate claims of harm from debt equivalence issues. This is a fair solution because the question of possible harm to ratepayers via this debt equivalence issue requires a broader discussion of possible balance sheet effects from self-build and offsetting risk mitigation with third-party bids.

**Another fair and transparent aspect of the RFP is the wide range of categories and transaction types available for bid.**

Another fair and transparent aspect of the RFP is that it allows for participation in multiple categories. Three categories are offered, based on heat rate and capacity factor.

- Baseload facilities' are defined as those with a capacity factor of 60% and Higher Heating Value (HHV) heat rates in the 6,900-8,870 btu/kWh range
- Intermediate load resources have capacity factors of 20% to 60% and HHV heat rates in the 8,870-11,500 btu/kWh range
- Summer Peak purchases are offered from July to September from the hour ending 7 AM through 11 PM, excluding NERC holidays

In addition, multiple transaction types are defined and allowed to compete as well. The RFP seeks seven major transaction types.

- Power Purchase Agreements (PPAs)
- Tolling Service Agreements
- Asset Purchase and Sale Agreements (APSAs) on bidder sites
- APSAs on Company sites
- Purchase of an existing facility
- Purchase of a facility jointly owned and/or operated by PacifiCorp
- Restructuring of an existing contract

Generally, resources must be tied to an asset, available for a term of five years or more and be 100 MW or greater in size. However, the RFP also features three exceptions. These are exceptions in the sense that they do not have to conform to all of the standard rules concerning delivery term and amount of supply. The exceptions are:

- Load Curtailment
- Qualifying Facilities
- Geothermal or Biomass facilities

A final touch is that non-asset backed bids of less than five years duration are allowed to compete as well. The end result of all of these allowable categories and transaction types is that the competition is open to a wide and diverse set of bidders, who have the option of choosing the form of their bid.

**Option values for shorter-term purchases should be measured accurately.**

Shorter-term offers such as the non-asset backed offers that PacifiCorp allows here can give ratepayers an "option value." By "option value" we mean that these contracts give the Company an opportunity to reacquire supply when they expire. If the Company signs a 20 year contract and market conditions change the Company is "locked in" to its contract. This can be good or bad, depending on market conditions.

This problem typically occurs in evaluating business decisions. The standard way to handle it is to convert each stream of payments to an annuity. An annuity is the equal annual payment over the life of the alternative that has the same present value as the actual, unequal annual costs that are expected to be incurred. A ten year bid would calculate the annuity over ten years and a five year bid would have a five year annuity. The alternative with the lower annuity is the better choice. We understand that PacifiCorp will use a similar method, although they calculate a “real levelized” annuity, that is, an annuity which increases with inflation with a present value equal to the actual costs over the lifetime of the project.

Key to finding the option value when comparing bids of unequal lives over a given time frame is how to value the “fill in” years. Take our example above; if we were looking over a ten year period and could only choose the 5 year or the 10 year deal we’d need to assume some sort of cost incurred after the 5 year deal expired.

To our understanding, PacifiCorp has used in the past a “fill in” method using two reasonable assumptions for replacement power: (a) spot market purchases and (b) a new generic power plant such as a combined cycle plant. We would only suggest that the Company consider expanding its analysis by adding two other “fill ins.” One is simply to take the original offer and escalate it for cumulative inflation as appropriate. The second is to assume the bidder would offer a price in the same proportion to market prices in the future as it did when it won the original RFP. These two added analytical assumptions could be used as sensitivity analysis to see if the composition of the preferred portfolio would change based on these assumptions.

**To assist bidders, the Company should establish a maximum quantity of supply taken for each shortlist.**

One issue of transparency arises in the selection of bids to the initial and final shortlists. On the selection of the initial shortlist the RFP states; “the initial shortlist will include the top bids in the three categories.” Nowhere in the RFP does it state what a top bid will be or the quantity of these top bids that will be taken. We understand that the Company may wish to wait and see what results the procurement generates until deciding how many bids make the shortlist. For example, it could be that bid scores exhibit distinct “tiers” of results and the Company would take the first and second tiers into the initial shortlist. However, bidders may want to have some sort of indication as to the quantity the Company will select so that they can understand what a selection to the initial shortlist means. The same issue occurs with regard to the final shortlist.

We would recommend that PacifiCorp set some thresholds for the shortlists to better inform bidders what selection to the shortlists means in terms of their bid status and likelihood of selection. To keep some flexibility we recommend that: (a) the initial shortlist be comprised of resources that, in total, add up to no more than two times the maximum acquisition from this RFP (i.e. 2\*2,000 MW or 4,000 MW) and (b) the quantity of bids selected to the final shortlist be no more than 1.5 times the maximum acquisition from the RFP.

## B. RISK MEASUREMENT AND ASSIGNMENT

**PacifiCorp employs a complex, multi-step approach to select a robust portfolio of bids which perform well given a wide range of expected future conditions.**

The RFP features a very strong plan for bid analysis. The process for evaluating the bids and selecting winners is meant to take account of the uncertain nature of the future. By testing bids under a wide range of potential futures scenarios involving changes in key bids, the Company is attempting to select a “robust” portfolio of bids. That is, bids which perform well in a variety of potential futures.

Bids will be evaluated in a multi-step process. For the initial shortlist evaluation they will be compared to projected market prices via PacifiCorp’s RFP Base Model. The RFP Base Model is an Excel model which values the bid’s cost versus the Company’s estimate of future market prices. The RFP Base Model will determine the initial price score. The bid’s cost will be compared to PacifiCorp’s projection of wholesale market prices to determine a present value revenue requirement (PVRR). The lower the bid cost, the higher the PVRR will be and the more valuable the resource. Bids at 60% below market will receive a perfect score, with bids above 140% of the market receiving a score of zero. Bids in-between will be linearly interpolated. For example, if a bid is perfectly break-even with the market it will receive a 50% price score.

Bids will then be evaluated for non-price characteristics. The non-price factors attempt to quantify some factors that are not included in the bid price. They are grouped into three categories;

- Development Feasibility/Risk - This category assesses the likelihood that the project can be successfully developed as proposed based on factors such as project schedule, engineering design, technology maturity, and fuel supply arrangements
- Site Control and Permitting - This category reviews the bidder’s plan for obtaining site control and permits such as water rights and right-of-ways
- Operational Viability/Risk Impacts - This category examines the bidder’s strategy for complying with environmental regulations, the environmental impact of the plant and the bidder’s Operating and Maintenance (O&M) plan for the facility

The relative weight given to price and non-price factors is 70% and 30% respectively. The score from this evaluation will establish the initial shortlist. The top performing bids in each category (base load, intermediate load, and summer peak) will move on to consideration for the final shortlist.

The final shortlist will evaluate the bids and Company Benchmarks using the Capacity Expansion Model (CEM) and Planning and Risk (PaR) models to assess risks using both “stochastic” and “scenario” analyses. Recall from our discussion above, that “scenario” analyses examine a single path of a variable to answer a “what if?” type question. Stochastic analyses examine multiple paths for variables to answer a “what could happen?” question.

PacifiCorp’s CEM model will determine, for a given assumed path of certain variables, the optimum (i.e. least-cost) resources to satisfy a given reserve margin. The CEM model looks at a given “group” of resources and tests each potential combination of resources to see which combination satisfies the Company’s need for the lowest cost. CEM is a model which uses scenario (or “what if”) analyses; it assumes only one path for variables at a time. PacifiCorp will “stress test” the CEM model by looking at low, medium and high cases for emissions and wholesale market and natural gas costs. The cases will be “conceptually consistent” with the 2007 IRP, but may reflect more recent data. The key output for each scenario will be a preferred portfolio of resources. Each portfolio will also be re-run as a fixed selection in all the CEM cases, to see if there are any portfolios that perform exceptionally poorly in a given scenario.

Each portfolio selected in the CEM model will be further evaluated in the Planning and Risk (PaR) model via a stochastic analysis. The stochastic analysis assesses five variables. Those five variables are (a) retail loads; (b) natural gas price; (c) wholesale electricity price; (d) hydro electric generation; and (e) thermal unit availability. A possible range for each of these risks is determined based on historical experience. The PVRR model will, to our knowledge, be run for several different CO<sub>2</sub> emissions cost levels as it does not allow for dynamic changes in that variable.

For each portfolio of alternatives PacifiCorp will estimate the net PVRR under 100 different sets of assumptions. That is, the cost (net PVRR) of each portfolio will be estimated with 100 model runs. From those 100 runs will come the following data;

- Expected PVRR - The average cost of the portfolio over the 100 scenarios
- Tail Risk PVRR - The average PVRR of the top 5% (i.e. top 5) most expensive scenarios
- PVRR Volatility - The volatility, or measure of average change in value for all 100 scenarios. This represents the magnitude of change in portfolio value depending on changes in variables
- Risk Adjusted PVRR - This is defined as the average PVRR *plus* the 95<sup>th</sup> percentile PVRR times the probability of that 95<sup>th</sup> percentile value occurring (i.e. 5%). For example, if a portfolio has an average PVRR of \$20 Billion and a 95<sup>th</sup> percentile value of \$30 billion (i.e. the portfolio has a 95% chance of costing ratepayers less than \$30 Billion) then the Risk-Adjusted PVRR is \$21.5 Billion)

The winning portfolio of bids will be the one that is shown to be the most “robust”, as indicated by having the lowest the Risk-Adjusted Present Value of Revenue

Requirements (PVRR) over a range of CO<sub>2</sub> emissions cost cases. We believe that this is an effective way to select a robust portfolio. It gives credence to the risk inherent in a portfolio by using the 95<sup>th</sup> percentile value, but, by adjusting this value by the probability of occurrence, it does not place *too* much emphasis on upper tail values that are less likely to occur.

**PacifiCorp’s evaluation methods assess most of the key risks which will affect resource costs in the future.**

The method that PacifiCorp lays out for assessing risk is a good one. But the effectiveness of the evaluation process depends heavily on what risks are assessed. In our view the key risks going forward, i.e. the risks which will have the greatest effect on resource costs for ratepayers, are natural gas prices and CO<sub>2</sub> emissions regulation costs.

Natural gas prices are an important risk to assess because of the wide swings we have seen in these costs over the past decade. These price swings can translate into large rate increases for ratepayers. On the other hand, the lower capital costs of gas combined cycle units (as compared to coal or nuclear facilities) make gas-fired facilities a potentially attractive option. Because the economics of selecting gas-fired generation depends so heavily on future gas prices, it makes sense to test bids against many varied paths of prices. Furthermore, by testing and evaluating this risk the Company offers bidders the chance to add some value to their bid by either fixing or limiting the amount of gas price fluctuation a consumer will see.

CO<sub>2</sub> emissions cost risk is important because it represents significant unknown future cost burden, particularly to coal-fired facilities. In this RFP PacifiCorp will only request coal facilities to the extent that the facilities are “consistent with multi-state legal and regulatory requirements regarding new and existing coal resources” and will test those facilities under a wide range of potential emissions costs. This range is important because, as of today, there are a wide and diverse range of opinions as to what emissions costs will be in the future.

As mentioned above, in the PaR model runs PacifiCorp will assess other risks as well. These include; hydro generation levels, thermal outage rates, wholesale power prices, and demand changes. All of these are appropriate variables to consider, as all of the can have an effect on bid costs.

As noted, a more qualitative review of risks will be performed during the scoring for the initial shortlist. It is important to note that we anticipate having to consider other qualitative risks beyond the initial shortlist screen. If, for example, a utility Benchmark option is being evaluated for the final shortlist selection we will still have to consider the non-firm nature of that bid. If a bidder proposes a deviation from the pro forma agreements as part of their bid proposal we would have to take that into account as well.

**There remain some smaller risks that could be more completely accounted for in the evaluation process.**

There are a few risks which we believe could be more effectively addressed within the evaluation process. These risks could have a measurable effect on bid costs and may even have an effect on selection of the winning bidder. They are; (a) transmission costs, (b) capital costs and (c) power sales off-system.

As it stands, bidders have to include transmission *interconnection* costs (the costs to hook into the PacifiCorp system) but not *integration* costs (modifications necessarily to deliver power through the PacifiCorp system). PacifiCorp Transmission will separately estimate these costs based on unit size and interconnection point.

Costs to construct new transmission paths and facilities, like the costs to construct anything else, have been rapidly rising in the past few years. As the Utah Division of Public Utilities recently pointed out in the Utah version of this RFP approval proceeding, PacifiCorp's transmission integration cost estimates nearly tripled at some sites upon a reevaluation conducted by PacifiCorp Transmission during the 2012 RFP process.

While the current process is acceptable, the IE cautions that the estimates of integration costs are just that, estimates. We are concerned about a situation where a bid could be won or lost solely on the basis of a transmission cost estimate. Because those estimates can fluctuate we think it might benefit the Company and ratepayers to consider building in some variability to the transmission cost estimates. This could take the form of using multiple "cases" for transmission cost estimates, provided by PacifiCorp Transmission or simply increasing the cost estimates provided by a fixed amount (say, 10 percent). If the increase in costs does not affect the resource selection decision then the evaluation team will know that transmission costs are not that great a factor in resource selection. We do note the fact that PacifiCorp will allow the IE to meet with PacifiCorp Transmission to understand the nature of their cost estimates.

Capital costs risks will be somewhat accounted for in that bidders may use large, publicly defined indices (the CPI and the PPI) to index part of their bids and account for increases in construction costs. These indices all have multiple, publicly available forecasts. However, because these indices can vary we think that it would be useful for PacifiCorp to "stress test" these assumptions. For example, they may assume that PPI increases at a faster rate than forecast. The goal here is to attempt to reflect the fact that indexed bids will have some variability in capital costs and give credit to bidders who offer fixed pricing.

Power sales are another area where some attention is needed. The issue is that a portfolio may be lowest cost because, in the modeling process, it makes profits by selling excess energy off-system. To the extent that any one portfolio is dependent on this strategy to lower costs, the evaluators must take this risk into account when making their portfolio decision. This is particularly important when the preferred portfolio includes a great deal of output from coal, or other resources that other jurisdictions may not want to

utilize due to regulatory restrictions. While we understand that PacifiCorp's CEM model does have some accounting built in for RPS standards in neighboring jurisdictions, it may be a useful exercise, if the winning portfolio is heavily dependent on off-system sales, to further restrict sales to see if this issue changes the selection of the winning bids.

### C. PRODUCING A POSITIVE RESULT

As we hope will be clear from our comments, with the exception of our objections above, PacifiCorp has done a good job in designing a fair and transparent process which manages and assigns risk. However, we still must consider whether there are any requirements or other indications that the RFP will not produce a positive result for ratepayers.

#### **Based on our observations, we fear that participation in PacifiCorp RFPs is declining, and could affect bid results.**

Based on our observations of bidder participation levels in this 2012 RFP and the pre-issuance events leading to this RFP we are concerned that the All Source RFP will not generate a great deal of response from bidders. One of the Company's more recent procurements, the 2003A peaking RFP, drew, according to press reports, 79 individual bids (though the number of bidders was likely somewhat less since some bidders probably made multiple offers). The 2012 RFP (for base load) drew fewer bids and the pre-bid activities in this docket have not (to our knowledge) drawn a great deal of feedback from bidders.

This trend is very problematic, because what creates a good result in any RFP is the presence of a large and diverse pool of competitors. If bidders don't show up to this RFP, then we will be in danger of not having a positive result.

While PacifiCorp did e-mail a large group of bidders concerning the initial workshops and RFP filings, there has not been, to our knowledge, a significant turnout at the pre-bid events or great participation in the RFP pre-approval processes. We would therefore encourage the Company to redouble its efforts to reach bidders and inform them of this opportunity. The Company should publicize the fact that; (a) there is a wide range of products (peak, base load and intermediate load) up for bid, (b) a wide range of available transaction types will be permitted, (c) the bidding parameters allow for capital cost indexing and (d) the evaluation process is fair and transparent and designed to select a robust set of bids. If the Company decides to bid under the same terms as a third party bidder, then that fact should also be communicated to bidders. Just as important, if bidders are not going to participate it is important to know *why* in case the RFP, or future RFPs can be modified in some way to bring in more bidders.

**Increases in construction costs require comment on the indexing methodology from bidders and flexibility from the evaluators.**

We do not know for sure why bidder participation levels seem to be decreasing. One concern that we have, based on our work in the 2012 RFP, is that the requirement for a fixed, or binding bid, subject to indexing, may be preventing bidder participation. As mentioned, bidders may currently index up to 40% of their capacity costs for new resources to the CPI and PPI-metals.

Boston Pacific highly approves of measures that make a bidders bid binding. In this way the risks of cost overruns are not shifted onto the ratepayer. Nevertheless, we understand that the market for new construction projects is pushing up prices rapidly and it is difficult to create a fixed-priced bid at this time. We do not want to open a full-on “cost plus” structure with no ratepayer protection, at the same time, we want to invite as many bidders as possible. Therefore, we would ask bidders to suggest any structures that they feel may help them submit bids, while at the same time providing some form of cost protection for ratepayers.

Because of rising prices, we would also encourage the Company to be open to new proposals regarding cost control from bidders. In a rising cost environment, bid structuring may be one way for a bidder to deliver value to ratepayers and we do not want to automatically shut out good ideas. Some of these ideas could include, “banded” or “collared” offers that are allowed to vary within a given range (say 5 to 10 percent) or offers which include a second “not to exceed” price.

Another way to control costs would be to use indices other than the CPI and PPI. Some potential indices for use are;

- The implied return (or yield) on U.S. Treasury Bills, which generally represents the “risk-free” cost of investment
- Indices from the Bureau of Labor Statistics. The BLS has many targeted cost indices which might more accurately reflect power plant construction costs. One example is the BHVY - Other Heavy Construction Index, a broad-based index which represents escalation in large-scale construction projects, including power plants
- The Handy Whitman Power Plant Indices, or similar industry-specific indices, which cover a large range of power-plant specific items

**D. COMPLIANCE WITH COMMISSION GUIDELINES**

**The quantity of Front Office Transactions planned to be purchased should not be changed from 2007 IRP levels until analyses of bids proves otherwise.**

There has been considerable discussion in interveners and Staff commentary as to what the Company’s actual resource need is. In the All Source RFP the Company simply

states that it will seek up to 2,000 MW of energy and capacity from the three identified resource categories; base load, intermediate load and summer peak. The RFP shows a resource deficit on page 8 of 2,446 MW to 3,171 MW for the years 2012 to 2016, respectively. This comes from the Company's 2007 IRP.

In the 2007 IRP PacifiCorp undertook analyses to determine how to fill this gap with a combination of renewables, demand-side management, market purchases, and generating assets. Staff notes that, in the IRP proceeding, they took issue with the magnitude of the Company's needs, and had a lack of confidence in the load forecast as well.

Subsequently, the Company has updated its forecasts and provided, in response to Staff's data request number 10, a load and resources (L&R) balance sheet that showed deficits of 1,936 MW in 2012 escalating to 2,547 MW in 2016. Note that this calculation did not include *any* FOT, including the FOT quantities identified in the IRP action plan. When Staff inquired about this, PacifiCorp stated that they were seeking resources which may "replace all or a portion" of the FOT identified in the IRP Action Plan.

In addition, in response to Staff data request number 20 PacifiCorp presented a new CEM run with updated information, which showed FOT in greater amounts than the 2007 IRP. These new FOT amounts meant that the system position was only deficient 824 MW in 2012 and 883 MW in 2016. Staff did not see any reason for departing from the FOT quantities identified in the 2007 IRP. Staff replaced the "new" FOT quantities with the 2007 IRP quantities and determined a thermal resource need of 1,119 MW in 2012 escalating to 2,067 MW in 2016.

Clearly, there is some confusion about what the Company should be acquiring in the future to serve its needs. We note, however, that Staff seems to view as generally favorable the Company's newest load forecasts. Staff has not had a chance to officially review the load forecasts, but states that they are "more in line with actual growth reported by PacifiCorp for recent periods." At this point the IE does not have any objection to the new forecasts either.

This observation is key because, if the load forecast is acceptable, then the question shifts from "how much supply should PacifiCorp acquire?" to "what is the mix of supply that PacifiCorp should acquire?" In other words, the argument is not whether PacifiCorp should acquire 1,500 MW versus 2,000 MW. The argument is, should PacifiCorp acquire 1,000 MW of generation and 500 MW of FOT or 750 MW of generation and 750 MW of FOT?

Another key to this debate is that there is no FOT equivalent being put out for bid in this RFP. This is because FOT are made on an annual forward basis, and the RFP is looking 4 or more years into the future. Since this is the case, we do not see a reason, at the current time, for replacing the FOT identified in the 2007 IRP. This leads us to agree with Staff's calculation of the need for supply-side longer-term resources, which ranges from 1,119 MW in 2012 to 2,067 MW in 2016.

Note that this does not mean the FOT quantities cannot be changed in the future. What we want to see is a process whereby the RFP informs or improves upon the IRP, as envisioned by the Commission. In a practical sense, this means that the level of actual FOT should be determined by an analysis of the bids received.

The tradeoff between bids and FOT will be examined in two steps of the bid evaluation process. First, bids will be compared to PacifiCorp's forward price curve using the RFP Base Model, which we take as a reasonable estimate of FOT prices. Second, FOT are an active component in the CEM model. To our understanding, based on the 2007 IRP, up to 1,200 MW of FOT "competes" each year with resources to serve load. After actual bids have been put through the bid evaluation we will have a much better idea of how they compare to potential FOT. If the bids fare well, in other words, if bids score well in the RFP Base Model and FOT procured in CEM solutions are low, then PacifiCorp may want to acquire relatively more resources. If the opposite happens, the bids score badly in the Base Model and FOT purchases in CEM are at or near threshold limits, then PacifiCorp may want to reduce its acquisitions.

As we wait to see the bid results the Company will also be to update its load forecasts and market price projections. In addition, the results of the 2012 RFP will hopefully be public and incorporated into the purchasing decision.

**The RFP is generally compliant with Commission Guidelines as long as the Company submits an initial Benchmark resource score.**

When reviewing the RFP with an eye towards compliance with the Competitive Bidding Guidelines we find that the RFP is generally in conformance. Per Guideline #7, the RFP is generally fair and in line with the IRP (subject to the discussions of comparability and resource needs above), it is in response to a need identified in the IRP and it has been submitted in draft form with draft contracts (Guidelines #1 and #6), it utilizes an IE and Benchmark resources (Guidelines #3, #4 and #5), and selects bids on price and non-price terms and does not consider debt equivalence in the shortlist selection (Guideline #9).

One area which still represents a potential problem deals with Guideline #8. Guideline #8 requires that a detailed score for the Benchmarks be presented to the IEs prior to the opening of third party bids. In the 2012 RFP PacifiCorp did not provide an initial score with the Benchmarks because of Code of Conduct issues. We understand that the Company now believes some sort of process could be designed to get the initial price score to the IEs.

When this issue arose in the 2012 RFP we suggested a method by which Code of Conduct conflict could be avoided. This involved pulling in a separate person or team of people to perform the initial price and non-price screen on the Benchmarks only. Since all bids go through the same RFP Base Model we thought that it would not be too difficult to train someone well enough that they could model the Benchmarks on a

comparable basis to other bids. We acknowledge that the non-price scoring will bring up comparability issues, since there is so much judgment involved. However, the non-price qualities of the Benchmarks will be revisited in the consideration for the final shortlist.