BEFORE THE PUBLIC UTILITY COMMISSION OF OREGON

**LC 48**

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| In the Matter of Portland General Electric Company's 2009 Integrated Resource Plan | ) ) ) | Reply to Staff's Final Comments and Draft Order of the **NW Energy Coalition** |

The NW Energy Coalition (NWEC) appreciates this opportunity to reply to the Staff's Final Comments and Recommendations and Draft Proposed Order in this proceeding.[1] Traditionally, Oregon IRP Orders have served two important purposes. First, and most important, of course, is acknowledgment of all or parts of a utility's action plan based upon the IRP analysis. But a second critical piece is guidance by the Commission to the utility regarding how it should improve or augment subsequent IRPs, including critiquing the methodology and metrics used in the utility's analysis.

We take both of these purposes seriously and commend the Commission for constantly improving the IRP process. This IRP is no exception, and much of our detailed comments here will address ways to improve the analysis so that future Commission decisions can be made from a stronger basis than found in this one. While NWEC has little heartburn regarding the ultimate portfolio actions the Staff proposes to acknowledge (and not acknowledge) in its Draft Order, the same cannot be said for the quality or appropriateness of the analysis that was supposed to provide the basis for its conclusions. Paradoxically, our lack of heartburn stems from one of the few conclusions that *can* be drawn from PGE's analysis: *no particular plan was shown to be the least cost, least risk option*. In fact, PGE's analysis provides almost no support for its conclusions—nor indeed, *any* conclusions that would help one to choose an alternative. Thus, we can be comfortable concluding that a plan similar to the BART III/DEQ 2018 proposals is at least as good as any of the other plans considered, as judged against the cost and risk metrics examined.

We actually believe it is a superior plan because of its potential to reduce carbon risk and spur new green investments, but those metrics, unfortunately, were not included in PGE's IRP analysis. One of our recommendations, discussed below, is that in future IRPs, when no clear "winner" can be selected from the analysis, that the Commission look for other deciding factors that make sense for customers.

We find the underlying analysis in PGE's IRP to be fundamentally flawed in numerous ways; so much so that it provides almost no rationale for choosing a preferred portfolio. We submit that in fact, the portfolio actions PGE is recommending cannot in any significant way be seen as an objective outcome of the analysis that was supposed to objectively direct its choice. PGE seems to agree, for ultimately its decision is supported

[1] NWEC is also a party to joint comments with a number of interveners ("The Group") that addresses our agreement with PGE and other Boardman-related issues.

by extraneous factors and unsupported assertions that are made to justify its choice, unrelated to all the modeling that takes up so much of the IRP.

The Draft Order attempts to correct some of the Company's errors in its guidance for future IRPs, but it misses the mark in a number of areas that, without correction, will call into question the validity of subsequent IRP analyses. We urge the Commission to require future IRPs to meet a higher standard than this one does—or why bother?

## I. Boardman

We support the acknowledgment of PGE's BART III proposal subject to approval by state and federal regulators. However, we believe that this acknowledgment should be broadened to say, "BART III or a plan substantially similar that is approved by DEQ/EQC and the EPA that ends coal-fired operation no later than the end of 2020." NWEC has urged both DEQ and PGE to come to an agreement on a plan based on DEQ's 2018 and PGE's BART III proposals, that satisfies the Clean Air Act. To do so, it may have to require some technical modifications to PGE's BART III, a closure date somewhat earlier, and perhaps some operating limits, but still be substantially similar. Thus we recommend broader language to include such a likelihood.[2]

### a. Backstop

We agree with Staff that, in many respects, the issue of what PGE does in the event DEQ/EQC (or later, the federal EPA) denies PGE's request to amend its Regional Haze Plan, is not quite ripe—although our reasons for coming to this conclusion are somewhat different than the Staff's. Staff thus recommends that the "backstop" issue be decided in the utility's next IRP Update.

Some advantages of this approach are that the controversial issues regarding newer load and gas price forecasts can be resolved with new information. In addition, as we suggest below, the parties could (and should) have better information that illuminates the question of when and at what price replacement resources could be in place for early Boardman closure dates such as 2015/16. Finally, some of the methodological errors interveners and Staff have pointed out in this docket can be fixed. The Commission should make it clear that it expects these analytical improvements and a full cost/risk analysis as part of any request for a backstop plan's acknowledgment. The backstop decision is a big one, and the Commission must have more than a cursory update upon which to decide it.

In particular, much of the controversy in this docket has been over the comparative merits of the two major backstop plans under discussion: DEQ's 2015/16 closure option, and

[2] NWEC would like to make it clear that our agreement with PGE means that we would support BART III if approved by DEQ/EQC/EPA. However, it does not mean that we would *not* support a similar, or even different plan if these regulators recommend one, if it ends coal-use at Boardman no later than the end of 2020 and is lower-cost/less risky than other alternatives, regardless of whether PGE favors it or not.

PGE's Diversified Thermal with Green 2040 portfolio. (The Commission should not limit the backstop decision to only these two options, however. The Update should allow a renewed consideration of other options that could perform better under updated assumptions and corrected methodology.) PGE's modeling shows that a 2015/6 closure is the lower cost option for consumers, under both the reference and bench request assumptions, and the environment. However, PGE has argued that a 2015/16 closure date must be taken off the table, because of unsubstantiated fears of execution risk: a concern that replacement power might be extremely costly or even unobtainable in the time period from 2016 and 2018. Staff seems to agree with PGE's assertions, *with little hard evidence, one way or the other,* that, "the risk associated with this type of strategy is not in the best interest of ratepayers." (ibid.)

It is therefore critical to a rational discussion of the backstop (if needed) in the IRP Update that the parties and Commission have solid evidence that addresses the issue of whether or not power is available and/or needed for a few years after a 2015/16 closure while long-term replacements are acquired. We asked, during the last scheduling conference, that PGE provide some evidence of its assertions, perhaps by issuing an RFI to the market regarding replacement power. Ironically, Staff opposed this request, but now is forced to opine on the issue with no evidence on which to base its argument, admitting that, "The upshot of this debate is that it is uncertain whether a reasonable replacement strategy for Boardman can be developed and implemented by late 2016 or early 2016." (Draft Order, p. 13) NIPPC, in its September 1st comments (p. 5) also asked the Commission to require PGE to issue an RFI for the same purpose.

This issue is of no small consequence. The entire question of spending over a half – billion dollars on pollution controls while emitting millions of tons of CO2 through 2040 could rest on PGE's unsubstantiated assertion—in the face of NIPPC's contrary opinion, a party with some experience in this regard—that replacement power is not available. Whether or not replacement power can be obtained during the period 2016-18 at a reasonable cost and risk is one of <u>two deciding facts</u>, the other being the need for replacement power that we address below. These facts need to determined to a much better degree in the Update. <u>The Commission should direct PGE to take this window of time, while we wait for a DEQ/EQC/EPA decision, to issue such an RFI and do whatever other due diligence is needed in time for its IRP update to establish the facts regarding the market's ability to provide replacement power</u>. It is critical for any reasonable discussion of backstop options that this issue be decided upon better evidence than has so far been offered.

**b. Need for Boardman, post 2015/16**

Underlying the debate over Boardman closure dates and execution risk of replacement is the more fundamental question of when Boardman's output would have to be replaced if the plant is closed. While this issue may be moot for now until the backstop plan has to be determined in PGE's IRP Update, it warrants discussion here while the arguments are fresh and to correct some factual errors in the record.

Staff has concluded that, while it agrees with NWEC and others' arguments that PGE's reference case load-growth assumption is too high, the difference in assumptions is not enough to conclude that immediate replacement of all of Boardman's output is not warranted. (Staff Final Comments, p.3) But Staff's analysis is faulty and its conclusion wrong.

Staff argues that while "PGE's reference case load forecast may overstate future demand, our analysis indicates that PGE's energy and capacity need remains significant even under a lower load scenario." (ibid)[3] Staff then shows that reducing the load forecast to an amount it deems more reasonable lowers the energy need by 108 aMW in 2016 (and its capacity deficit by 191 MWs), but despite this change, the total gap would still be "…challenging to fill if Boardman were shutdown in 2016." (ib. p.3-4)

However, this logic is faulty, because the fact that there is a large resource need is irrelevant. The other actions PGE is going to take in its action plan fill most of the gap. It is only the change due to keeping or shutting down Boardman that is at issue, and this reduction due to a lower load growth forecast cuts the need for immediate replacement by about half, for capacity (capacity is the reliability measure that is at issue).

Staff also makes a factual error in regard to this issue. On p. 9 of its Final Comments, the Staff attempts to compare PGE's projected load with the Council's forecast. Staff argues that the Council's "frozen efficiency" forecast should be compared to PE's 1.7% annual growth rate:

> Replacing PGE's 1.7% load growth forecast with the NWPCC's 1.2% reference case [frozen efficiency] forecast would result in an approximate 128 MWa reduction to PGE's forecasted load for 2015. This reduction is consistent with moving from PGE's reference case forecast to PGE's low load forecast. (ibid, p.9)

It is evident that Staff sees little difference between the Council's forecast and PGE's low load forecast. But Staff is comparing apples and oranges, because it may be confused by a term the Council uses to describe conservation achievements: "frozen efficiency." This term is used by the Council to mean counting the contribution from existing measures and the continuation of energy efficiency (EE) measures such as codes and appliance standards, but not any utility (or ETO) savings or *new* codes and standards that are expected to come on-line during the planning period. The Council's frozen efficiency

[3] Both Staff and PGE make the irrelevant argument that PGE has large replacement power needs whether or not Boardman is shut down. PGE attempts to deflect discussion of its obviously high load forecast by arguing: "…a significant portion of the resource needs…are driven by the retirement or expiration of existing resources. As a result, a substantial need for new resources exists aside from any needs driven by future load growth." (PGE Reply comments p. 23) While true, this has nothing to do with whether an immediate Boardman replacement is needed. No one, including NWEC, is arguing that the other resource acquisitions in PGE's action plan should not occur. So the argument is irrelevant to whether *an additional, marginal* amount is needed if Boardman closes. The only fact at issue here is whether or not resource needs, *after other action plan items are considered*, are needed.

forecast is similar to what PGE considers its "Without embedded EE" forecast. (PGE's IRP, p. 37, Table 3-2)

While Staff is correct to point out that there isn't too much difference between the Council and PGE's forecasts *without EE* (about 0.5%), the important difference shouldn't be to compare growth rates without conservation, but to compare them after conservation, since it is clear that the ETO will readily meet its share of the Council's targets. That difference is much bigger. PGE forecasts that over the period 2010-30, it's growth rate "with embedded EE" will be 1.91% per year, while the Council projects 0.34% for Oregon. The reason for the large difference is that the Council, but not PGE, included conservation savings from the many new federal lighting and appliance standards that will go into affect in the next few years. (This was the main difference that WECC identified in its analysis of utility IRPs, as we mentioned in our Reply Comments.)

For the more important 2010-15 forecast, PGE's forecast is 1.72% compared to the Council's 0.47% annual rate. That difference is 1.25% per year. So if we use Staff's rule of thumb calculation quoted above that a 0.5% change in growth rate for 2010-15 would result in about 108 aMW of energy and 191 MW of capacity, using this 1.25% difference would result in a change of about 270 aMW of energy and 477 MW of capacity. That is, using the Council's "after EE" load growth forecast shows that Boardman would not be needed *at all* for reliability purposes in 2015/6.

In making this mistake of comparing PGE's "with embedded EE" forecast to the Council's frozen efficiency forecast which does not have new EE, Staff repeats the error that PGE commits in its Reply Comments (p. 25) where the Company self-references its own mistake in Table 3.2, p. 37 referred to above. This mistake was pointed out in NWEC's opening comments, and in its Reply, PGE simply repeats it—and the reference it cites is its original mistake.

> As we discuss in more detail in the 2009 IRP, when accounting for regional differences, PGE's forecast is largely consistent with the NWPCC Forecast. (IRP at 37) For the 2010-15 time period, PGE's annual average load growth rate is 1.7% (including embedded EE) while the NWPCC's load growth forecast for Oregon is 2.0% *Id*. (Reply Comments, p. 25)

Here are the facts again. NWPCC's Oregon load forecast for 2010-15, *after including EE* is 0.47%, not 2%. PGE is simply wrong, and unfortunately Staff relies upon it as a fundamental underpinning for arguing against a 2015 closure.[4]

Further reducing the need for Boardman are two items that Staff critiques PGE for omitting or underestimating: DR and Conservation Voltage Reduction. While we don't know what these two measures will subtract from PGE's load, clearly it will not be zero, further reducing the need for immediate Boardman replacement.

[4] We pointed out this mistake in our original comments, and again in our Reply Comments. (NWEC Opening Comments p. 6, including the cite to the NWPCC source document, and NWEC's Reply Comments p. 4.)

Finally, we repeat the point we made in our Opening Comments (p. 7) that much of PGE's need for new resources over this period is a strategic decision to rely less on the market than the utility previously had done for years. Slide 19 from PGE's April 26, 2010 presentation to the Commission has two pie charts: before and after acquisitions in the proposed action plan by 2015. The "before" chart shows 32% spot market purchases, and the "after" chart shows only 2%. This is a strategic decision to reduce market exposure—apparently disregarding the superior performance of its "Market" portfolio in this IRP—and is a huge driver for the need for new resources. If PGE reduced its market exposure a little more slowly, it would reduce the need to immediately replace an early Boardman closure.

NWEC believes PGE has exaggerated its resource need in 2015 in order to remove the lowest cost 2015/6 closure option from consideration. We urge the Commission to:

(A) Take with a large amount of skepticism the Company's claims of the need to replace Boardman's output by 2015/6. (a) PGE's load forecast *is not* consistent with the much lower NWPCC Oregon forecasts (after EE); (b) PGE did not include further reductions due to DR and Conservation Voltage Reduction; and, (c) PGE does not need to so quickly reduce its market exposure from past practice in this IRP.

(B) Require that PGE issue an RFI and perform other due diligence to confirm or not the availability of bridge IPPs to serve customers, if needed, between 2016 until longer-term permanent replacement resources are acquired. This confirmation can take place while we wait for a final DEQ/EQC decision on PGE's current Boardman Plan.

This controversy is all the more reason why we urge the Commission to require any backstop decision (if needed) in the next Update to be based upon updated assumptions, information regarding the availability of replacement resources, and a full cost/risk analysis of a wide variety of options.

## II. Methodological errors in PGE's analysis

We ask the Commission to follow past practice by directing that PGE improve its IRP in subsequent rounds. In our opinion, PGE's preferred portfolio—and the backstop—are not the result of careful analysis and modeling. Instead they emerge from an ill-defined and arbitrary process whereby certain facts are ignored while others are given outside importance, and meaningless metrics are offered to justify management decisions. While ultimately we support a DEQ-approved plan that would close Boardman no later than the end of 2020, we cannot support the IRP analysis that was supposed to provide its factual and logical underpinning. We addressed our concerns in depth in our Opening and Reply Comments, and we will only summarize the most important points here.

It is of great importance that the Commission has a factual basis on which to judge the utility's proposals and to justify its decision to customers. Because we are saying that the analysis was almost entirely worthless, we are disappointed that Staff scarcely touched

upon many of these issues. We hope that the Commission takes this opportunity to fix this very broken process.

1. Statistical Analysis -- It is irresponsible to make important, costly decisions relying upon data comparisons where the margin of error is either unknown, or so large that the differences are not meaningful.

   Throughout the IRP we are presented with cost comparisons, risk comparisons, rate impacts and scoring comparisons without any calculation or indication of a margin of error. The Commission and the parties are asked to make or judge decisions between portfolios without having any idea of whether the differences in costs, risks, rates or scores are statistically significant. This issue is of critical importance. If two (or more) plans are statistically un-differentiable, than we should be looking for other factors to choose between them. (For example, we argued that if two candidate portfolios' costs or scores were not statistically different, another metric that is, such as carbon emissions, should be used as a tie-breaker.)

   In this IRP, we have been repeatedly told by PGE that one plan is more costly, or less risky, than another; and that therefore, it should be chosen. But as we showed in our Comments, most of these differences are statistically insignificant. We recommend:

   *The Commission should require that all important cost, risk, rate and scoring metrics include a measure of margin of error in order to provide a factual basis for comparison. The utility should determine appropriate statistical parameters and tests. Numbers given with no such statistical analysis should be given little weight.*

2. Important Scoring Criteria must be Explicit – One of our frustrations with the IRP has been that factors that turned out to be controlling in the choosing of the preferred portfolio were not described in advance nor incorporated into the scoring process. Quite a few promising portfolios were simply eliminated by PGE claiming they had too many renewables, or couldn't be executed. The highest scoring portfolio, for example, "Green with on-peak energy target," and other portfolios with similar amounts of renewables, were simply taken out of contention. Boardman closure options before 2018 were similarly claimed to be impossible to execute. These criteria were introduced later in the process with little or no evidence given for their justification.

   In addition, PGE argued that near-term rate impacts should take great weight compared to NPVRR costs over the planning period, implying that a rate impact going into affect in 2015 was somehow going to worsen today's recession—while at the same time arguing that by 2015 robust load growth would occur. But the Company can't have it both ways. If Oregon remains in a recession through 2015, so that even a small rate increase would be very unwise, then PGE's optimistic load forecast would have been wrong—and replacing Boardman's output, which might cause a rate increase, will not be needed.

In general, PGE's scoring methodology is broken. As discussed earlier, without any statistical analysis, it is impossible to know whether differences between scores were meaningful or not. There is also a complete arbitrariness to the weighting of the risk metrics among themselves and the cost metric. Some metrics correlate with each other closely, so little new information is added, but the weight increases by adding them both into the final score. We also need a discussion regarding whether a cost difference of $XX is worth reducing $YY worth of risk. Finally, in the absence of meaningful differences in portfolio scores, we should come up with tie-breaking factors that should help make a final decision. We recommend CO2 emissions be used for this purpose. Another possibility is how the portfolios contribute to Oregon's economic health.

3. Timing matters – Related to the foregoing issue is one of timing. PGE argues that certain portfolios, even if they score well, have a high execution risk. Scenarios with larger amounts of wind, such as found in the high-scoring "Green with On-Peak Energy Target" and "Diversified Green" are taken out of consideration because PGE states, "…it is not clear if such a high amount of additional wind in the Pacific Northwest would be available…over a relatively short time-frame. In short, this portfolio carries higher execution risk." (IRP, Ch. 11-A, p. 86)

   Similarly, the 2014 and DEQ's 2015/6 Boardman closure options are deemed to have unacceptable execution risk:

   > …it does not allow sufficient time to put a long-term replacement resource in place. The average time to construct a CCCT is six to seven years, and…we simply cannot know whether we will be able to purchase firm energy and capacity for replacement power…. (PGE Reply comments, p. 8)

   So even though these portfolio options might score well, PGE feels they are not executable. But this is a problem of the Company's own making. If it takes so long to replace Boardman, PGE should have been examining the issue in its last IRP. PGE should not have been surprised by Boardman's DEQ problems nor the large risk of carbon regulation. If it turns out that PGE is forced to choose an option that is more costly, due to its lack of planning, customers should not be on the hook for it. The Commission should make it clear that if options take a long time to execute, they need to be included and analyzed in the action plan timeframe. If building a new resource takes 6-7 years, then that lead time should be taken into account as the utility plans ahead.[5] Lack of time, due to poor planning, should not be the controlling factor in this expensive decision.

4. Risk metrics are inappropriate – We commend the Staff for confirming some of our concerns regarding the risk metrics chosen by PGE, including variability metrics that

[5] Although we did not spend a lot of time on the issue of "optionality," – see p. 12 of our Opening Comments – this problem with long lead-time resources should be a reminder that lack of options can cost money. Thus, portfolios with more flexibility should be valued more. Perhaps a risk metric that measures this quality should be explored in the next IRP.

subtract out the mean, and one of the Company's reliability measures. (Staff Final Comments, p. 14)

Staff decided to use only three metrics to evaluate PGE's suggested portfolios: the average of the four worst deterministic futures, stochastic TailVar90 risk, and total cost. (Draft Order, p.10) Implicit in this decision is a rejection of PGE's other metrics as not providing additional (or relevant?) information. (This is a bit confusing, since the Staff also argues for better reliability metric(s) to be analyzed within the risk modeling on p. 13 of its Staff Comments. We will assume that Staff is really arguing for the use of four metrics, once reliability is included.) We generally support this conclusion that the other metrics are not of much use, but hope that the Commission makes its opinion more explicit than hinted at here.

Also, if it is decided that these are the best metrics, then a new scoring matrix must be developed to re-rank the portfolios—especially in the event a "backstop" decision is needed in the IRP Update. If indeed Staff relied only on those four measures, it is incumbent upon them to provide its matrix to justify the approval of BART III in this proceeding. There is much evidence to suggest that the rankings might be very different than PGE's. The Commission should be curious to see how the Staff scores and rankings differed from PGE's before accepting Staff's recommendation.

That said, we believe the Commission should require the use of an additional risk metric: carbon emissions. It is not disputed by PGE, Staff, nor most of the interveners, that the impact of carbon emissions is one of the greatest risks faced by Oregon's utilities and its citizens. Whether or not one agrees with the overwhelming scientific consensus on global warming, or what actions should be taken, all agree that the regulatory risk of carbon is huge.

Unfortunately, the three risk measures that Staff is proposing to rely upon do not address carbon risk very well, nor directly. The stochastic TailVar90 metric includes carbon prices as a symmetric risk around the reference value. Thus the impact of a low carbon price is offset by the impact of a high price. To illustrate why this occurs, imagine that two portfolios are being tested. Assume that Portfolio A is heavily dependent upon low-cost coal, while B depends more on higher cost renewables. Portfolio A will score much better than B in futures with low carbon prices, but Portfolio B will score better in high carbon price futures. Since the stochastic modeling has roughly the same number of high and low carbon price futures, these two portfolios will not be differentiated by this metric.

A similar result can occur for the Staff's other proposed metric, average of the four worst deterministic futures. Again, Portfolio A can score badly in some futures that are not the same as Portfolio B's worst futures.

For these reasons, we ask the Commission to include a direct measure of carbon emissions as one of the important risk metrics in evaluating portfolios.

We also take exception to using LOLP or other reliability metrics as a measure of risk when choosing portfolios. As we have stated in our other comments (e.g., Opening Comments, p. 14), reliability[6] as measured by these metrics is mostly a measure of how "long" a utility's portfolio is, usually referred to as resource adequacy. Table 11A-23 of the IRP shows that there is a fairly straight-line relationship between reliability and load/resource balance. Thus, if one believes it is important to reduce unserved energy, then the answer is to add resources. One can determine the reliability level independent of the nature of the portfolio. Thus, measures of unserved energy should not be used as risk metrics to evaluate portfolios.

5. Bench request did not ask for full analysis – NWEC agrees that further analysis of portfolios using better load and gas-price forecasts was useful. However, we regret that the bench request stopped short of asking PGE to re-run its *risk analysis* using the new assumptions. So while the bench request provides new data on expected costs using the new assumptions, it did not provide the parties or Commission with a new risk analysis under those assumptions.

   This lack is unfortunate, because PGE has based its arguments for choosing its preferred portfolios not on cost, which actually seemed to favor different portfolios, but on risk. So we do not know whether the improved bench request assumptions would have affected the risk rankings significantly.

   This table gives the cost results for the three plans most in contention at the moment. Costs are in $millions.

| | Diversified Thermal with Green (2040) | DEQ 3 (2015/16 closure) | BART III (2020 closure) |
|---|---|---|---|
| Reference Case | $28,674 | $28,546 | $28,499 |
| Bench Request | $21,386 | $21,077 | $21,125 |

   Several conclusions can be reached from the data. First note the huge change in costs due to the changed assumptions between the reference and bench-request cases. These differences dwarf by many times the differences between the Portfolios. This is evidence, once again, that variability due to external factors is overriding compared to variability in costs between these portfolios. Note too, that while the costs are different between the plans, we have no way of knowing whether they are *significantly* different. Without any statistical analysis, we don't even know if we can draw *any* conclusions regarding cost differences between the Portfolios. What are the margins of error?

   (However, for what little it's worth (not much), and considering that some parties like to try and draw weighty conclusions from such differences, some would conclude that

[6] When speaking of reliability in the context of an IRP, it would be better to label it "resource adequacy." Almost all outages are actually caused by distribution-level problems related to overheating of transformers, ice storms, vegetation and vehicle crashes. We should be careful to keep this in mind when talking about a concept that most people think of as, "the lights going out."

2015 closure is less costly than the other two options under the more realistic bench-request assumptions. Certainly, lacking other data, one could say that among the two backstop proposals, a 2015 closure is less costly than running Boardman through 2040 under either reference or bench-request conditions.)

However, we do not bring this up in order to draw unsubstantiable conclusions from statistically insignificant results. Instead, we use this to illustrate that the decision between these three Portfolios is being made on non-cost issues. Thus, the bench request gives us little new information. We ask that the Commission require that PGE, in its IRP update -- if the backstop is at issue -- provide a full analysis of the bench request including risk analysis, scoring and carbon emissions. And so that we are not again caught in the same dilemma, the Commission should also require PGE to provide measures of statistical significance in reporting all costs, risk metrics and scores, so that parties can know which differences are important and which are not.

## III. Summary and Conclusions

(The following summary of our recommendations should not be seen as a complete listing. Please see our other comments for other recommendations. This list emphasizes the points made in these Final Comments.)

In general, NW Energy Coalition is supportive of acknowledging a plan substantially similar to PGE's BART III that closes Boardman no later than the end of 2020 if it meets with DEQ/EQC and EPA approval. We are also supportive of determining the nature of a backstop plan, if needed, in PGE's IRP Update, rather than deciding that now. Such a delay will enable the analysis to include newer forecasts of critical assumptions and improvements to the Company's risk and scoring methodologies. We also support Staff's recommendations regarding discarding many of PGE's troubling risk metrics. Finally, we argue that a key ingredient for making an informed decision is getting answers to the question of when and at what cost replacement power can be obtained for Boardman's output. Thus:

> NWEC Recommendation 1: *The Commission should require PGE to issue an RFI and do other due diligence regarding the availability and cost of replacement power options before conducting its update to determine a backstop plan.*
>
> Recommendation 2: *The Commission should require a full cost/risk analysis as part of any request for backstop plan acknowledgment that conforms to the other recommendations regarding risk metrics and statistical analysis detailed in these comments. The backstop decision is a big one, and the Commission must have more than a cursory update upon which to base its decision.*

In general we have to say that most of the analysis in this IRP is worthless. This is a strong statement, but we believe we have backed it up in our comments over the course of this docket. First, it is irresponsible to make important, costly decisions relying upon

data comparisons where the margin of error is either unknown, or so large that the differences are not meaningful.

> Recommendation 3: *The Commission should require that all important cost, risk, rate and scoring metrics include a measure of margin of error in order to provide a factual basis for comparison. The utility should determine appropriate statistical parameters and tests. Numbers given with no such statistical analysis should be given little weight.*

Second, because we have shown in our Opening and Reply Comments that PGE's cost, risk and scoring metrics are statistically useless for ranking the leading portfolios, it is incumbent upon the Commission to require the Company to consider other important metrics that *do* differentiate the portfolios. We suggest carbon emissions as the most important metric, although a measure of Oregon's financial health would also be useful.

> Recommendation 4: *The Commission should require a direct measure of carbon emissions be used as a risk metric in selecting portfolios.*

Third, reliability (really, resource adequacy) is a factor independent of a portfolio's design, because it can be changed simply by changing the load-resource balance generically. Therefore it should not be used in portfolio selection.

> Recommendation 5: *The Commission should not use measures of resource adequacy for choosing between portfolios. Instead, the Commission should instruct utilities to determine the best cost/benefit load-resource balance target exogenously and apply it to all portfolios.*

NWEC appreciates this opportunity to comment and hopes that the Commission will also take advantage of it to improve the process for the next IRP cycle.

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# *Summary Report*

## LC 48 PORTLAND GENERAL ELECTRIC COMPANY

**Category:** Least Cost Planning

**Filed By:** PORTLAND GENERAL ELECTRIC

In the Matter of
PORTLAND GENERAL ELECTRIC COMPANY
2009 Integrated Resource Plan. (See also 5/4/10 errata filing).
Filed by Randy Dahlgren.

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# *Summary Report*

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# *Summary Report*

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**LC 48 CERTIFICATE OF SERVICE**

I hereby certify that I served the foregoing: **(1) Final Comments of NWEC in Portland General Electric's 2009 Integrated Resource Plan (LC48), (2) "Group" Comments on LC48, and, (3) the Attachment to Group Comments** on the attached list of persons on October 29, 2010 by hand-delivering, e-mailing, or mailing (as indicated on the service list) to each a copy thereof, and if mailed, contained in a sealed envelope, with postage paid, addressed to said parties at the last known address of each shown below and deposited in the post office on said day at Salem, Oregon.

DATED this 29th day of October, 2010.

By: /s/ Steven Weiss

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