BEFORE THE PUBLIC UTILITY COMMISSION OF OREGON
LC 66

In the Matter of	)	
PORTLAND GENERAL ELECTRIC	)	Public Comments of
2016 Integrated Resource Plan	)	The Oregon Chapter of
	)	Lawyers for Good Government
_____	)	

Lawyers for Good government is an affiliation of lawyers and other legal professionals united in their efforts to fight for quality, justice and the future of our Nation.

Since our Nation's future is in danger due to climate change like never before, we are particularly concerned with PGE's slap dash approach to Integrated Resource Planning that leaves critical planning questions unanswered and heavily stacks the deck in favor of new thermal capacity resources to meet short, medium and long term needs versus other measures such as short-term contracts, energy storage and more renewables development.

I. PGE'S IRP DOES NOT COMPLY WITH PUC GUIDANCE

A. Failure to Identify Specific Resources

In the IRP, PGE states that its preferred portfolio option "is not a pre-determined course of action. Alternative portfolio strategies may prove cost effective in future procurement analysis. In fact, four of the top-ranked portfolios had relatively comparable performance to one another. The precise resources modeled in the 2016 IRP will not be the exact resources available in the market at the time of acquisition, nor will they be offered at the same prices assumed in the modeling." IRP pg. 26.

Indeed, PGE states that, although it identified "Efficient Capacity" as its preferred portfolio, the similarity in scores for the top four performing portfolios mean "that it is not appropriate to constrain the types or quantities of future resource procurement based solely on the results observed in this IRP." IRP pg. 338.

This approach subverts the very purpose of the IRP, to evaluate a variety of resource options to select an appropriate portfolio of resources. By its own admission, PGE's proposed IRP does not identify specific resources, but relies merely on placeholders for future analysis and decisions. This renders the IRP virtually meaningless.

Instead, PGE proposes to rely on the RFP process to select the specific resources to meet its capacity need. However, the RFP process is not the appropriate forum for long-term resource planning. As Staff noted in its final comments, after receiving PUC approval for its Action Plan, PGE would have "wide latitude" in the RFP process. Staff pg. 87.

As the PUC stated in its Frequently Asked Questions on PGE's IRP, "An IRP, and the process used to develop it, helps ensure that a utility engages in careful resource planning." PGE's placeholder approach to resource planning fails to meet this requirement. Given this glaring flaw in the IRP, it would not be appropriate for PGE to make any decisions on specific resource acquisition based on this IRP.

B. Ownership v. PPA

In addition to not identifying specific resources PGE intends to meet future needs with, the IRP also fails to identify whether it will meet future capacity needs through PGE-owned projects or through PPAs. PGE once again attempts to avoid providing a concrete plan. PGE proposes to address the issue of ownership versus PPAs through some future bidding process rather than providing a thorough plan, as required, in the IRP. IRP pg. 222.

PGE also fails to adequately assess the risks and benefits of PPAs versus ownership. PGE's assessment does not adequately address some of the benefits of meeting capacity needs through PPAs, including the ability to address short-term capacity needs without significant capital investments. On the other hand, its analysis of the risks of ownership fails to mention the risk of investing large amounts of money today on new projects when there are likely to be significant technological advancements in the near future that would significantly change the cost versus risk analysis. IRP pg. 224.

II. PGE'S PREDICTED LOAD GROWTH

PGE claims that even with the additional energy efficiency, demand response and renewables proposed in the IRP, it will face a deficit in supply.

It attributes a significant amount of that deficit to demand growth. PGE predicts an annual load growth of 1.2% and also modeled a "high" case of 1.7% growth and a "low" case of .5% annual growth. IRP pg. 27.

However, as Staff pointed out in its final comments on the IRP, PGE's predicted 1.2% annual load growth far exceeds that predicted by other regional utilities and even PGE's own most recent load growth. Staff noted that PGE's load growth in recent years has averaged 0.016% annually. Staff pg. 24

In its analysis, even PGE's "low growth case" assumes load growth of .5% annually, which is still dramatically higher than PGE's recent actual load growth. IRP pg. 106.

PGE provides no reasonable basis for predicting its annual load growth would so suddenly, and dramatically diverge from recent trends.

Therefore, one of the fundamental assumptions behind this IRP is flawed, rendering its conclusions unsupportable.

III. PROPOSALS TO MEET CAPACITY DEFICIT

Whatever the size of PGE's capacity deficit, the IRP's proposal to commit to long term dispatchable resources without seriously considering short-term contracts or storage capacity to meet those deficits, is inappropriate given the current fluctuations in the market.

A. Fully Explore Short Term Contracts

As noted above, PGE claims that there is currently inadequate information to identify which specific long-term resources it will invest in at this time. If that is the case, then PGE should not be investing large amounts of money in capacity expansion until the company has adequate information to inform long-term decision-making.

Indeed, there are currently significant changes in the market as well as energy technology that are likely to open reasonable alternatives very soon, including the energy storage requirements under HB 2193.

Instead, PGE simply included generic long term capacity investments to be determined at some later point and did not seriously consider short term contracts as a solution to near term capacity deficits.

In the near term, PGE should pursue market solutions to buy capacity from existing projects, covering any gaps with transactions, not risky major new construction projects. There is no need for PGE to build big, baseload generation right now.

As Staff noted

> "With significant changes coming to utilities and their customers in the near future, it is important that investments made now are expected to be valuable across a variety of futures and support the inexorable changes that are coming. …Future uncertainty is too great to justify such an extensive near-term investment as the IRP's two- to four-year timeframe has been the historic focus of Action Plan needs and activities." Staff pg. 4.

B. Energy Storage

In the medium term, the strongest position for PGE customers and shareholders will likely be investment in storage. With the massive deployment and price declines in wind and solar power, the western US has more than enough clean energy to serve loads in the foreseeable future.

While PGE makes a fair point that renewable energy output does not perfectly correlate with load, the solution to that problem is not to further overbuild generation infrastructure.

Storage technology is following the same cost pattern as wind and solar, with large scale deployment occurring in California and other parts of the country. Furthermore, as evidenced by Southern California Edison's recent storage projects built in response to the Aliso Canyon gas leak, storage can be deployed quickly and in modular quantities.

Despite the fact that PGE acknowledges that the PUC directed them to "consider storage in its portfolio analysis in this IRP," PGE largely punts on the issue, claiming it is too difficult to analyze. IRP pg. 234.

> "While the 2021 analysis provides preliminary insights into these questions, PGE acknowledges that findings may vary overtime and across renewable portfolios, conventional resource portfolios, battery configurations, and market conditions. Therefore, this analysis is preliminary and investigative. PGE will continue to evaluate the economics of battery systems and other storage resources as additional data becomes available." IRP pg. 235.

Battery storage is both dispatchable load and dispatchable generation, making it uniquely suitable to address both upward and downward flexibility challenges that will increase as PGE adds more renewable capacity in compliance with RPS. Battery storage would also provide the added benefit of allowing the company to capture very low cost energy for later delivery to customers.

PGE notes that at 25% RPS, the Company would require "access to approximately 400MW of incremental dispatchable resources" to mitigate upward flexibility challenges. IRP pg. 145. The Company also predicted some downward flexibility challenges at 25% RPS, anticipating "curtailment of up to 3.3 percent of the available renewable energy." IRP pg. 145. PGE further notes, that at the 50% RPS requirement by 2040, there is a "potential for large amounts of renewable curtailment."

Despite acknowledging these upward and downward flexibility challenges as the Company adds more renewable capacity, the IRP gives little more than lip service to the possibility of using storage to address

those issues. Indeed, PGE specifically states that in the context of upward flexibility challenges under 25% RPS, dispatchable resources "refer to firm resources that have the characteristics of a CCCT, frame CT, or reciprocating engine." IRP pg. 145.

In reference to downward flexibility challenges in the 50% RPS scenario, the Company maintains that thermal capacity would be its primary approach mitigation tool. The RPS merely notes that in addition to thermal resources, it will need to look at a variety of other mitigation options "potentially including energy storage." IRP pg. 145

PGE itself notes that, as the percentage of renewables in their portfolio increases, energy storage would address both excess generation and peaking needs. IRP pg. 233

Storage Costs and Benefits

PGE failed to consider several important factors in assessing the costs and benefits of storage technology.

PGE concludes that storage is not cost effective in this IRP by comparing it negatively to the cost impact of a frame CT. IRP pg. 245-246

However, comparing frame CT to storage is not an apples to apples comparison. Both storage and frame CT technology can be used to meet short term capacity deficiencies. However, PGE's analysis does not account for the unique benefit of storage over frame CT technology, namely capturing low cost renewable energy generated in excess of demand during lower demand periods for later delivery to customers. Frame CT does not position the company well to absorb low cost renewable generation for later delivery to customers

The value of storage over a short-term thermal peaking system like frame CT, will only increase as PGE continues to add renewable capacity to its portfolio in compliance with RPS standards. However, PGE itself acknowledges that its analysis of 25% RPS "did not consider opportunities to sell excess renewable generation." IRP pg. 145.

BPA Transmission Bottleneck

The Bonneville Power Administration recently issued a decision not to upgrade transmission lines along the I-5 corridor to address transmission congestion due to generation sources in Washington State transmitting power south to address high loads in the Portland area.
https://www.bpa.gov/Projects/Projects/I-5/Documents/letter_I-5_decision_final_web.pdf

BPA instead determined to solely explore "[n]on-wires measures to manage generation and loads to reduce peak congestion…" Solutions specifically mentioned in the order include energy efficiency and battery storage. BPA's order indicated the agency plants to "…work closely with the region's other utilities, regional planning organizations and economic development organizations to convey the economic and operational implications of siting loads and generation resources in different areas. We will incentivize new load centers and resources to locate in areas that will make the best use of existing transmission capacity and minimize costs to them and to the region's electricity consumers."

In light of BPA's order, PGE should consider possible regional benefits of storage in PGE's territory, including potential partnership with BPA on such a project.

BPA's transmission bottleneck also highlights another weakness in PGE's assessment of the costs and benefits of storage. In light of the I-5 transmission bottleneck as power from the north flows south to Portland, assessing the location of potential storage projects is critical to understanding the costs and benefits. Yet PGE acknowledges that "the IRP considers a generic energy storage device without specific locational information. Each storage resource therefore receives zero locational value for the purposes of this analysis." IRP pg. 237

Furthermore, PGE acknowledges that it is already exploring battery storage options at specific locations within its service territory as a Benchmark Resource. IRP pg. 346 The Company provides no explanation as to why it did not assess the costs and benefits of storage using the locations it had already identified.

C. Predetermined Gas Plant

PGE acknowledged that there were little differences in its scores for the four top performing portfolios that it analyzed. IRP pg. 338 Despite using those similarities as an excuse to avoid identifying specific resources it plans to rely on, PGE still identified "Efficient Capacity" as its preferred portfolio. The Efficient Capacity portfolio includes a combined cycle combustion turbine in 2021. IRP pg. 313

Furthermore, while the Company claims that the Preferred Portfolio identified is not a commitment to specific resources, PGE acknowledges that it is "performing due diligence for the potential acquisition of" a simple cycle combustion turbine at the existing Carty Generation site. IRP pg. 346. Indeed, even while this IRP has been under review with the PUC, PGE filed applications with the Oregon Energy Facility Siting Council and Oregon Department of Environmental Quality to expand its natural gas generation operations at the Carty site to add an additional 330 MW capacity unit.

On May 12, PGE announced it was suspending its request for permitting for the new gas unit. However, PGE did not foreclose the possibility of reviving that application. PGE must provide an IRP that fully complies with PUC guidelines, including identifying whether or not it plans to pursue the Carty addition.

CONCLUSION

We urge the Public Utilities Commission to send PGE back to the drawing board to draft an IRP that includes more reasonable load growth predictions, genuinely evaluates a full suite of options for meeting future capacity needs rather than stacking the deck in favor of thermal capacity, and fully describes its preferred option for how to meet those capacity needs.

Dated this 20th Day of June, 2017

Respectfully submitted,

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