PACIFIC POWER
A DIVISION OF PACIFICORP

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November 28, 2017

VIA ELECTRONIC FILING

Public Utility Commission of Oregon
201 High Street SE, Suite 100
Salem, OR 97301-3398

Attn: Filing Center

RE: LC 67 – PacifiCorp's Response

PacifiCorp d/b/a Pacific Power submits for filing its Response to Staff's Public Meeting Memorandum regarding PacifiCorp's 2017 Integrated Resource Plan.

Please direct any questions on this filing to Natasha Siores at (503) 813-6583.

Sincerely,

Etta Lockey
Vice President, Regulation

BEFORE THE PUBLIC UTILITY COMMISSION
OF OREGON

LC 67

In the Matter of PACIFICORP d/b/a PACIFIC POWER 2017 Integrated Resource Plan.	PACIFICORP'S RESPONSE TO STAFF'S PUBLIC MEETING MEMORANDUM

I. INTRODUCTION AND SUMMARY

PacifiCorp d/b/a Pacific Power's 2017 Integrated Resource Plan (2017 IRP) presents the least-cost, least-risk plan for meeting its customers' resource needs[1] while building a strong foundation for an affordable and increasingly cleaner electricity future. PacifiCorp's approach to integrated resource planning is robust, incorporating input from stakeholders during a long pre-filing public-input process and continuing as analyses and portfolio development is refined up to the date of filing with the Public Utility Commission of Oregon (Commission). The thorough and detailed process continues as parties' review the plan after filing through discovery, workshops, and the exchange of comments.

The 2017 IRP analyzes all methods of meeting our customers' near- and long-term resource needs, including energy efficiency, demand-side management, front-office transactions, new supply-side resources, and changes in use of or upgrades to existing resources to develop the preferred least-cost, least-risk portfolio of resources. PacifiCorp's 2017 IRP shows a need for wind generation by the end of 2020 across almost all modeled portfolios. PacifiCorp examined alternatives for meeting this near-term need, but transmission constraints limited its options.

[1] OAR 860-027-0400.

The continuation of federal production tax credits (PTCs), although limited, presented an opportunity for PacifiCorp and its customers. PacifiCorp's 2017 IRP capitalizes on the PTCs to not only meet its near- and long-term resource needs, but to also build new and much-needed transmission with *all-in net benefits* for customers. The preferred portfolio includes the Energy Vision 2020 projects (discussed below) and 1,040 megawatts (MW) of additional solar resources coming online over the 2028 to 2036 timeframe, as well as the projected retirement of 667 MW of coal-fired generation by the end of 2020 and 3,650 MW by the end of the study period in 2036. Energy Vision 2020 is an unprecedented opportunity to deliver near- and long-term customer savings while reducing customer risk. The Energy Vision 2020 projects include upgrading existing wind turbines, acquiring new wind resources, and building a portion of Energy Gateway sub-segment D.2 to relieve existing congestion and enable the interconnection of new extremely low-cost wind resources.

Energy Vision 2020 is neither merely an "economic opportunity" nor driven by compliance obligations under renewable portfolio standards. Instead, Energy Vision 2020 is part of PacifiCorp's least-cost, least-risk plan for meeting resource needs. The innovation in PacifiCorp's plan is in seeing the opportunity to bring near- and long-term benefits—in system reliability and flexibility as well as financial benefits—to our customers by capitalizing on the continued (but short-lived) availability of federal PTCs to achieve what would otherwise be unachievable without substantial increases in customer rates. The plan also reduces risks related to market reliance and future compliance with renewable portfolio standards. And developments during 2017 indicate that customer benefits from Energy Vision 2020 will be *even greater* than reflected in the 2017 IRP, including (1) known repowering updates from actual market negotiations that have occurred throughout 2017; and (2) best and final bids received in November 2017 in the 2017R Request for Proposals for new wind resources.

The parties present a threshold question for the Commission: whether the 2017 IRP identifies a resource need and when that need occurs. There is no dispute that PacifiCorp has a 395 MW energy and capacity need beginning in 2028. There is also no dispute that PacifiCorp *currently* has less contracted or owned generation resources than needed to meet customer load, as evidenced by the presence of front office transactions (FOTs) throughout the planning horizon. The goal of the IRP is to determine the least-cost, least-risk portfolio of resources to meet those customer load-service needs. The Energy Vision 2020 projects meet both a near-term need within the two- to four-year period that otherwise would be filled by uncommitted FOTs, and a long-term energy and capacity need, at a heavily discounted cost and with reduced exposure to volatile wholesale markets that are driven by volatile fossil fuel prices and increasing carbon price risk. This is not the first time that renewables have provided an economic opportunity to displace FOTs at a lower cost and risk; in fact all 1,698 MW of PacifiCorp's existing contracted and owned renewable resources included in rates today, not including qualifying facilities, were acquired and approved by the Commission because they were demonstrated to be least-cost, least-risk, displaced FOTs, and were acquired well before any thermal capacity or renewable portfolio standard (RPS) need.

Staff claims that the Energy Vision 2020 projects represent a pivot away from FOTs in favor of the acquisition of new resources, which Staff characterizes as a "break from past resource planning logic" and a "very recent important development."[2] This is fundamentally not accurate. PacifiCorp has not modified its IRP modeling approach or the consideration or

[2] *See* Staff Public Meeting Memo at 34.

assessment of FOTs by the models as a supply-side resource that competes with all other supply-side resources for selection in the preferred portfolio on a least-cost and least-risk basis. The simple fact is that the Energy Vision 2020 projects out-perform FOTs and any other alternative supply-side resources in the near-term and long-term across the vast majority of scenarios.

The 2017 IRP also draws into sharp focus the purpose of the Commission's long-term planning process. Acknowledgment of the 2017 IRP is not a blank check for the company to move forward with resource acquisitions under any and all circumstances. Acknowledgment merely means the Commission agrees that the company should take action on its plan to pursue an unprecedented opportunity to meet a portion of the company's near-term and long-term needs on a least-cost, least-risk basis and deliver significant benefits to customers associated with upgrading and acquiring these renewable resources and transmission. Acknowledgment of an IRP is just one step in a larger process that culminates in a full prudence review by the Commission. Until the Commission reviews a resource acquisition for prudence, the utility bears *all* the risk of the acquisition; acknowledgment of an IRP neither changes that balance of risk nor the burden of proof when the utility seeks a future prudence determination.

The 2017 IRP and the subsequent input from Staff and stakeholders presents a threshold issue for the Commission: Does the 2017 IRP identify a resource need and, if so, when does that resource need occur? There is no dispute that PacifiCorp has a 395 MW energy and capacity need beginning in 2028. PacifiCorp also has a near-term resource need as evidenced by the FOTs that are displaced by the Energy Vision 2020 projects. The question before the Commission is whether to acknowledge the Energy Vision 2020 projects as resources needed to fill *both* a short-term and long-term resource need. Alternatively, the Commission could acknowledge the Energy Vision 2020 projects as an acquisition that fulfills a longer-term resource need. Failure to acknowledge the Energy Vision 2020 projects based on no demonstration of need would limit the IRP to planning only in the short-term while forgoing the opportunity to take advantage of production tax credits for the benefits of customers. Because PacifiCorp's 2017 IRP meets the Commission's guidelines and presents a reasonable least-cost, least-risk plan for meeting customers' needs, PacifiCorp respectfully requests Commission acknowledgement.

II. ENERGY VISION 2020 AND THE IRP FRAMEWORK

A. The preferred portfolio, including the Energy Vision 2020 projects, is the least-cost, least-risk portfolio to meet the resource needs identified in the 2017 IRP.

Staff's recommendation that the Commission not acknowledge the action items associated with the Energy Vision 2020 projects rests largely on Staff's claim that PacifiCorp has not demonstrated a resource "need." The fundamental issue presented by Staff's recommendation is whether resources that displace FOTs in the near-term and satisfy an energy and capacity need in the long-term are "needed" as that term is used in the traditional IRP framework. Staff answers this question in the negative, arguing instead that near-term resource acquisitions must be tied to a near-term capacity need. In defining capacity need, Staff assumes that uncommitted FOTs will be procured, and by extension, that lower-cost resources cannot displace these uncommitted FOTs—treating these resource alternatives differently than all other resource types analyzed in the IRP. Moreover, Staff continues to rely on an overly narrow interpretation of need that focuses solely on near-term need, even though the IRP is required to analyze resource need over a planning horizon that spans at least 20 years.[3] When need is

[3] *In the Matter of Pub. Util. Comm'n of Or. Investigation into Integrated Resource Planning*, Docket No. UM 1056, Order No. 07-002 at 5 (Jan. 8, 2007) (corrected by Order No. 07-047) (IRP must analyze resource portfolios over 20-year planning horizon).

viewed through its proper scope, the Energy Vision 2020 resources meet an identified resource need and fit within the traditional framework for least-cost, least-risk resource planning.

Staff agrees that the 2017 IRP indicates a capacity need of 395 MW (over and above planned uncommitted FOTs) beginning in 2028, and Staff uses this as its basis to claim that the Energy Vision 2020 resources represent an early acquisition that will meet 44 percent of this demonstrated need.[4] But Staff then claims that because there is no *immediate* need for resources, the Energy Vision 2020 resources are not needed and should not be acknowledged, despite the clear demonstration that in the near-term, FOTs will be partially displaced by the Energy Vision 2020 projects.[5] And despite the fact that almost every resource portfolio included a need for new wind in 2020. Staff cites no authority for its novel interpretation of need and does not acknowledge that the Commission effectively rejected Staff's narrow interpretation of need when acknowledging Portland General Electric Company's (PGE's) 2016 IRP.

In PGE's 2016 IRP, its preferred portfolio included near-term acquisition of PTC-eligible renewable resources to meet compliance requirements under the Oregon RPS n 2029.[6] In Order No. 17-386, the Commission acknowledged the potential reasonableness of PGE's early acquisition to take advantage of time-sensitive resource opportunities presented by expiring PTCs and found that early acquisition, if it results in customer benefits, can properly meet an identified resource need even if the need is not immediate.[7] In this respect, PacifiCorp's 2017

[4] Staff Public Meeting Memo at 16.
[5] Staff Public Meeting Memo at 16-17.
[6] *In the Matter of Portland Gen. Elec. Co. 2016 Integrated Resource Plan,* Docket No. LC 66, Order No. 17-386 at 6 (Oct. 09, 2017).
[7] Order No. 17-386 at 15. PacifiCorp's Response Comments provide additional discussion of Order No. 17-386 at pages 11-12. Although the Commission did not acknowledge PGE's proposal for early acquisition, the Commission invited PGE to return with a more robust proposal for early acquisition. *Id.* at 3. Thus, the Commission recognized the reasonableness of early acquisition even though it has yet to acknowledge PGE's specific plan for early acquisition.

IRP is conceptually indistinguishable from PGE's 2016 IRP[8]—both plans identify a long-term resource need and recognize near-term procurement as the least-cost, least-risk path to meet that need. Staff never reconciles its recommendation here with Order No. 17-386 or explains why PacifiCorp's near- and long-term resource need warrants no action, while the Commission found that PGE's long-term resource need may be reasonably met with early acquisition of PTC-eligible resources.

Staff also claims that PacifiCorp has presented conflicting descriptions of its resource needs, based on workshop presentations and request for proposals (RFP) filings.[9] PacifiCorp recognizes the confusion surrounding its assessment of resource need, but maintains that its assessment of need has been consistent throughout this proceeding: in the near-term, FOTs are partially displaced; and, in the long-term, the proposed EV 2020 resources defer the need for other, higher-cost resources.

First, at a workshop, PacifiCorp responded to Staff's concern that there was no near-term need for the Energy Vision 2020 resources by pointing out that there is a need from the start of the 20-year planning period. In recent IRPs, this need has been met with demand-side management resources and FOTs.[10] Because FOTs are uncommitted market transactions, their presence in the preferred portfolio indicates that there is a near-term need for capacity and energy that is met by market transactions. This explanation was intended to convey that under *any* view, near- or long-term, the 2017 IRP shows a need for resources. The Energy Vision 2020 projects included in the preferred portfolio in the 2017 IRP meet a portion of both the near- and

[8] The 2017 IRP and PGE's IRP are distinguishable in a number of ways, including the economic analysis supporting selection of the Energy Vision 2020 projects and the fact that PGE's renewable need was premised on RPS compliance need. These distinctions, however, do not change the fact that in PGE's IRP the Commission acknowledged the potential reasonableness of taking early action to meet an identified need.
[9] Staff Public Meeting Memo at 15.
[10] Staff Public Meeting Memo at 17.

long-term resource need identified in the 2017 IRP at a cost that is lower than all other resource portfolio alternatives.

In response to the apparent confusion over the treatment of FOTs when determining resource need, Staff recommends that PacifiCorp's need be assessed after accounting for FOTs included in the preferred portfolio.[11] This recommendation is counter to basic resource planning principles, where a load-and-resource balance to quantify future resource needs is prepared well before establishing a preferred portfolio, which represents the least-cost, least-risk plan to meet future resource needs. Contrary to Staff's implication, the company did not propose a new framework for identifying a capacity deficit when it pointed to the inclusion of uncommitted FOTs in the preferred portfolio. Indeed, PacifiCorp's treatment of FOTs in the 2017 IRP is unchanged from its treatment of FOTs in the last three IRPs, a point that Staff acknowledges in the Staff Memo.[12]

Second, Staff points to PacifiCorp's RFPs and claims that they have indicated a different resource need than the 2017 IRP.[13] To be clear, the resource volumes sought in the company's RFPs (both its conditionally approved 2017R RFP and 2017 solar RFP) do not convey an immediate resource need different from what has been identified in the 2017 IRP. Rather, the purpose of the RFPs is to solicit a robust market response for resources that can meet projected resource needs while delivering economic benefits for customers. Moreover, the fact that the RFPs both solicit resource volumes greater than the level of capacity in the preferred portfolio does not indicate that PacifiCorp will necessarily acquire resources at the requested levels. In fact, PacifiCorp will only procure resources that deliver customer benefits.

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[11] Staff Public Meeting Memo at 24.
[12] Staff Public Meeting Memo at 31-33.
[13] Staff Public Meeting Memo at 17-18.

B. The Energy Vision 2020 resources are not purely an economic opportunity.

Because Staff reasons that there is no near-term need for the Energy Vision 2020 resources, Staff concludes that they represent a pure economic opportunity akin to a merchant plant that will be used to generate revenues instead of serving load.[14] To be clear, the Energy Vision 2020 resources will serve customer load and meet the resource needs identified in the 2017 IRP, both near- and long-term, in the least-cost, least-risk manner. It does not follow that because the Energy Vision 2020 resources will be acquired by 2020 that they are pure economic opportunities that are untethered to a traditional notion of resource need.

C. Staff's recommendation ignores the customer risk associated with forgoing the PTC-eligible Energy Vision 2020 resources.

Staff acknowledges that the Energy Vision 2020 resources will meet a 395 MW capacity deficit in 2028 and, in the near term, the energy generated will displace market purchases.[15] If the company forgoes the Energy Vision 2020 projects, it will be forgoing the opportunity for customers to acquire heavily discounted resources in the near term in exchange for greater reliance on near-term market transactions and waiting until after the expiration of PTCs to acquire zero-fuel-cost resources to meet growing energy and capacity needs. Contrary to Staff's implication that there are no customer risks associated with forgoing the opportunity to procure PTC-eligible resources, there are risks associated with greater market reliance and waiting—and those risks will be borne by customers.

The company's robust portfolio modeling in the 2017 IRP compared the Energy Vision 2020 resources to greater market transactions and delayed resource procurement and the model

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[14] *See, e.g.,* Staff' Public Meeting Memo at 27 (describing "project revenue" from the Energy Vision 2020 resources, suggesting they are like merchant plants). Although Staff recognizes that the resources will serve customer load, much of Staff's analysis effectively treats the resources as if there only purposes is to generate revenue on behalf of customers.

[15] Staff Public Meeting Memo at 16.

consistently selected the Energy Vision 2020 resources as the least-cost resources in the vast majority of scenarios. Staff has presented no substantive analysis demonstrating that relying on the market instead of the Energy Vision 2020 projects will be lower cost and lower risk. Staff also provided no substantive analysis demonstrating that it is lower cost and lower risk to wait to meet a 2028 capacity shortfall after the expiration of PTCs. Although Staff points out that the Energy Vision 2020 projects have risks, that fact alone does not demonstrate that the projects are higher risk than the next best alternative. In fact, the 2017 IRP clearly demonstrates that the Energy Vision 2020 projects are least-cost, least-risk compared to all other alternatives, including heavier reliance on FOTs.

Staff further argues that when assessing risk in an IRP, the "upside benefit potential is never considered."[16] This is not accurate. When choosing between competing resource options (*e.g.*, acquiring PTC-eligible resources or relying on market transactions) a holistic risk assessment is completed that considers both scenario analysis and statistical risk analysis. One of the fundamental purposes of scenario analysis is to determine how competing resources compare over a broad range of market conditions. This analysis combined with the statistical risk analysis necessarily considers whether certain resources perform better or worse (*i.e.*, whether they have higher upside benefits or "downside risks") than others under varying potential futures and conditions.

Moreover, PacifiCorp's demonstration of the potential upside benefits of the Energy Vision 2020 resources was intended to show that Staff's identified potential risks could easily move in the opposite direction and that focusing exclusively on customer risk ignores the potential of customer benefit. Staff's argument that shareholders should bear all the risk also

[16] Staff Public Meeting Memo at 21.

ignores that symmetrical treatment would also have the shareholders absorbing all the upside. Furthermore, allocation of risk between shareholders and customers is more appropriately determined in a ratemaking proceeding.

Finally, Staff points out that there are risks associated with potential changes in the tax code that could impact the economic benefits of the Energy Vision 2020 resources.[17] The company acknowledges this risk and will update all its economic analysis before moving forward with any of the Energy Vision 2020 projects. This updated analysis will account for any changes in the tax code, market, or project cost estimates based on the most up-to-date information available.

D. The Energy Vision 2020 resources do not require a novel framework for acknowledgement or rate recovery.

Staff continues to recommend that the Commission adopt a novel framework for evaluating economic opportunity resources in the context of an IRP, including the adoption of ratemaking conditions to mitigate customer risk.[18] Several other parties, including the Industrial Customers of Northwest Utilities and the Oregon Citizens' Utility Board (CUB), likewise suggest that the Commission should impose conditions on rate recovery that would treat the Energy Vision 2020 resources fundamentally different from traditional utility investments.[19] There is nothing novel or unique about the Energy Vision 2020 resources that require such dramatic and unprecedented treatment. Indeed, these recommendations are premised on PacifiCorp not demonstrating a need for the Energy Vision 2020 projects, despite the fact that Staff acknowledges that PacifiCorp has an energy and capacity need in 2028. Neither Staff nor stakeholders have argued that special treatment of the Energy Vision 2020 projects are necessary

[17] Staff Public Meeting Memo at 21-22.
[18] Staff Public Meeting Memo at 23, 27-28.
[19] Staff Public Meeting Memo at 23-24

if the Commission finds that the company has demonstrated a need in the near- or long-term, or both.

Staff's recommendation relies on the "basic proposition" that "[w]here it is reasonable to put on the ratepayer all of the cost and risk associated with needed resources, it is not reasonable to do the same for economic opportunities that present considerable risk but are not needed."[20] Staff's premise for this proposition, however, is flawed. As Staff concedes, the Energy Vision 2020 resources are needed to meet a future resource need and therefore, even by Staff's rationale, cannot be a purely economic opportunity unconnected to need.[21] Using Staff's own logic, at the very least, the Energy Vision 2020 projects are an early acquisition in advance of need. Even in the hypothetical scenario where there was a proposal to acquire a resource in advance of need, Staff provides no support for its position that customers should bear no risk when a utility prudently acquires a resource ahead of need. Staff's lack of authority for its "basic proposition" is glaring considering that there are numerous examples where the Commission approved the early acquisition of a resource without unique ratemaking restrictions.[22]

Staff's proposal to eliminate customer risk is also unwarranted because the Energy Vision 2020 resources do not present risks different than typical utility investments.[23] Indeed, Staff identifies only one additional risk that applies to the Energy Vision 2020 resources—a "temporal

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[20] Staff Public Meeting Memo at 22.
[21] Staff' Public Meeting Memo at 16.
[22] *See, e.g., In the Matter of PacifiCorp d/b/a Pacific Power, Update to Schedule 203, Renewable Resource Deferral Supply Service Adjustment*, Docket No. UE 313, Order No. 17-019, Appendix A at 5 (Jan. 24, 2017); *In the Matter of PacifiCorp, dba Pacific Power, Petition for Waiver of Competitive Bidding Guidelines,* Docket No. UM 1374, Order No. 08-376 (July 17, 2008) (approving RFP waiver for Chehalis and noting that the plant was being acquired 4 years early and would increase near term rates); *In the Matter of Pacific Power & Light (dba PacifiCorp) Request for Proposals in Compliance with Competitive Bidding Guidelines established by Order No. 91-1383*, Docket No. UM 1118, Order No. 04-091 at 17 ("The Commission agrees that economic wind installations should be moved up.").
[23] Staff Public Meeting Memo at 21.

risk" because the resources are being procured before Staff claims they are needed.[24] Staff never explains why this "temporal risk" makes reviewing the Energy Vision 2020 projects "a much more difficult and complicated exercise in the context of an IRP, and [] unprecedented."[25] Staff also never explains why the temporal risk outweighs the risk of foregoing PTC-eligible resources. In addition, the IRP demonstrates that benefits from the Energy Vision 2020 projects accrue to customers in the near-term, well in advance of Staff's purported timing of need, so Staff's temporal risk has no basis even in their logic of need. Again, PacifiCorp disagrees with the assertion that the resources are being procured before they are needed because they are displacing FOTs in the near-term while also meeting a long-term energy and capacity need.

Moreover, Staff's proposed conditions for rate recovery bear no relationship to the additional temporal risk associated with the Energy Vision 2020 resources.[26] Staff proposes two ratemaking conditions: (1) that the Commission impose a construction cost cap on the Energy Vision 2020 resources; and (2) that the Commission calculate net power costs over the next thirty years using the modeled revenues used to determine that the Energy Vision 2020 resources are least-cost, least-risk.[27] Staff's conditions relate to risks such as performance and cost that apply to all resources, regardless of timing. Staff claims the proposed conditions are intended to mitigate the risk unique to Energy Vision 2020; but, in fact, they mitigate all customer risk—even risk customers normally bear with all other prudently acquired resources.

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[24] Staff Public Meeting Memo at 26 ("The ratepayer protections in Staff's alternative recommendation, however, are necessary because the utility is pursuing a potential economic opportunity well in advance of need and with additional temporal risk that is not already incorporated in the rate-base formula.").
[25] Staff Public Meeting Memo at 22.
[26] Staff Public Meeting Memo at 26 (identifying temporal risk as the only additional risk).
[27] Staff Public Meeting Memo at 27-28.

Notably, when the Commission reviewed PGE's proposal for early acquisition of PTC-eligible resources, it did so using the traditional IRP framework and without imposing any additional ratemaking conditions to mitigate customer risk associated with early acquisition.[28] Despite Staff's efforts to paint the Energy Vision 2020 resources as somehow unique and requiring an entirely new framework for analysis, there is nothing extraordinary about the resources or the company's 2017 IRP that requires new analytic framework for the Commission's review, except for the unique opportunity to acquire the projects at a steep discount and pass those benefits to customers.

E. Principles to guide conditional acknowledgment

While PacifiCorp does not agree with Staff that any new conditions to acknowledgment are necessary, if the Commission determines that acknowledgment of the Energy Vision 2020 projects requires conditions, then PacifiCorp proposes certain principles to guide development of those conditions.

PacifiCorp's first principle is that conditions placed on acknowledgment of the Energy Vision 2020 projects should clearly recognize that ratemaking is not part of the IRP process. PacifiCorp appreciates parties' acknowledgment that ratemaking issues do not belong in the IRP process[29] and encourages the Commission to similarly delineate any guidance included in conditional acknowledgment from the ratemaking process. It would be inappropriate to approve specific ratemaking proposals, such as the construction cost caps and limitations on net power costs proposed by Staff, in conditional acknowledgment; but it would be appropriate to provide guidance on what type of analysis the Commission expects to see when PacifiCorp requests cost recovery for the Energy Vision 2020 resources.

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[28] *See* Order No. 17-386.
[29] *See, e.g.*, Staff Public Meeting memo at 25; CUB Comments on Staff's Recommendations at 9.

PacifiCorp's second principle is that the mitigation of customer risk associated with the Energy Vision 2020 projects should be balanced and equitable. If shareholders are required to bear additional risk, shareholders should equally benefit from the additional upside potential associated with that additional risk. Staff's assertion that the rate of return is the sole compensation for shareholder risk is true only in the context of traditional resource acquisitions. If the Energy Vision 2020 projects are not deemed traditional resource acquisitions because the Commission finds that acquisition of these resources carries unique risks, the traditional rate of return may not be adequate to compensate shareholders for the shifting of risk from customers to shareholders.

PacifiCorp is exploring options for specific conditions that could include effectively managing and mitigating PTC risk and tax law changes for customers and will be prepared to address proposals for specific conditions at the December 5, 2017 public meeting.

F. PacifiCorp appropriately evaluated all types of resources when selecting the Energy Vision 2020 resources as least-cost, least-risk.

Staff argues that PacifiCorp should not have limited its assessment of new resources to only Wyoming wind resources[30] and claims that the company should have also considered wind development through long-term power purchase agreements (PPAs), instead of utility-owned resources.[31] To be clear, PacifiCorp's 2017R RFP is not limited to Wyoming wind resources and is also not limited to company-owned resources. If a long-term PPA is the least-cost, least-risk resource resulting from the 2017R RFP, then it will be selected.

[30] Staff Public Meeting Memo at 21
[31] Staff Public Meeting Memo at 24.

G. The transmission resource included as part of Energy Vision 2020 is needed.

Staff argues that the proposed Aeolus-to-Bridger/Anticline line is not needed because PacifiCorp has indicated that the line will not be constructed without the addition of new PTC-eligible Wyoming wind resources.[32] This position misunderstands the relationship between the Aeolus-to-Bridger/Anticline line and the new wind resources. The transmission line is necessary to allow the interconnection of the new wind resources, but it is also necessary to relieve existing congestion and bolster the reliability of the company's existing eastern Wyoming transmission system. Thus, the Aeolus-to-Bridger/Anticline line is needed even if the wind resources are not built. Without the PTCs from the new wind resources, however, the transmission line is uneconomic. Thus, the Aeolus-to-Bridger/Anticline line is needed regardless of the new wind resources, however, it can only be delivered with cost savings to customers by combining it with the wind resources in Energy Vision 2020.

III. REPLY TO STAFF'S FINAL COMMENTS

A. Coal Resource Actions

Staff believes that additional coal unit analysis, including 25 additional SO model runs, will "provide transparency for stakeholders and could help further optimize PacifiCorp's system costs."[33] As PacifiCorp explained at the September 14, 2017, workshop, the unit-by-unit type of analysis that Staff proposes will require significant work to produce and will not give a complete, portfolio-level view of the economics of PacifiCorp's coal portfolio. The structure of the proposed unit-by-unit analysis requested by Staff does not capture system cost impacts that would result with early retirements at more than one facility. Results from these studies will therefore provide limited insight into a least-cost, least-risk resource portfolio. With hypothetical

[32] Staff Public Meeting Memo at 20-21.
[33] Staff Final Comments at 30.

retirement dates assumed to occur at the end of 2022, portfolio impacts from these simulations are unlikely to influence the 2017 IRP action plan, which identifies specific resource actions required over the next two-to-four years.

Despite these concerns, PacifiCorp is willing to perform the additional SO model runs requested by Staff. PacifiCorp estimates it can produce these 25 runs by June 2018, which aligns with the beginning of the stakeholder process for the 2019 IRP. This will also allow the new analysis to inform subsequent analysis in the 2019 IRP by providing coal-unit screening studies early in the public-input process. The requested SO model runs will require further supplemental analysis regarding transmission and system balancing, based on the identification of any economic retirement, or a combination thereof, that may occur. In addition, PacifiCorp reiterates its willingness to work with stakeholders through a workshop process to address issues raised in this proceeding related to the company's analysis of its coal resources.

Although PacifiCorp agrees to provide the additional modeling, the company recommends several changes to Staff's proposed coal resource action item.[34] Specifically, PacifiCorp recommends that the results of the additional analysis be provided to the parties by June 30, 2018, rather than by March 30, 2018. PacifiCorp also recommend that it provide the table of results as requested, but not in "final comments" because that is not applicable. PacifiCorp's proposed modifications to Staff's action item are as follows:

1. Perform 25 SO runs – one for each coal unit and a 'base case.'
2. Provide the results of the SO runs to parties in LC 67 by June 30, 2018.
    a. Provide an itemized list of coal unit retirement cost assumptions used in each SO run by the same date.

[34] *See* Staff Public Meeting Memo at 42.

3. Provide a list of coal units that would free up transmission along the path from the proposed Wyoming wind project if retired, also by June 30, 2018.
4. Summarize the results by providing a table of the difference in PVRR resulting from the early retirement of each unit.

B. Energy Efficiency/Class 2 Demand Side Management

PacifiCorp appreciates Staff's recommendation to acknowledge action item 4a and its consideration of the company's responses to suggested modifications to that action item. Although Staff's suggested modifications have evolved since originally presented in final comments, PacifiCorp still believes that the suggested modifications are unnecessary for the reasons described below.

Staff continues to express concern with misalignment between the level of cost-effective Oregon energy efficiency resources included in PacifiCorp's IRPs and actual savings achieved by the Energy Trust of Oregon (ETO), which has historically exceeded IRP targets. To improve alignment, Staff suggests PacifiCorp hire an independent consultant to investigate the reasons for these differences.[35] Since the filing of Staff's final comments and PacifiCorp's response comments, the ETO released its draft 2018 Budget and 2018-2019 Action Plan for public input. The ETO's 2018-2019 Action Plan indicates that projected savings are slightly below, but generally in line with PacifiCorp's 2017 IRP.[36] Given the improved alignment that has already occurred and ETO's ongoing efforts to continue to improve alignment moving forward, the study recommended by Staff would not be productive at this time. PacifiCorp notes that Staff's

[35] Staff Public Meeting Memo at 36.
[36] ETO's draft target 2018 is 4% below PacifiCorp's IRP target. ETO staff has indicated to PacifiCorp that same relationship holds for 2019.

suggested modification appears to be motivated, at least in part, by ETO's over-achievement relative to its own forecasts. [37] If this is the case, it would be more efficient for Staff to work directly with ETO to investigate differences in planned versus achieved savings in the context of ETO action plans, rather than utility IRPs.

Staff's second suggested modification to action item 4a would require PacifiCorp "to scope and conduct a series of PAC led workshops explaining how the Company models potential, technical and achievable energy efficiency for its IRP forecasts."[38] While PacifiCorp agrees that it is important for IRP stakeholders to understand energy efficiency potential and modeling methodology, this work already occurs as part of the IRP public process. For the 2017 IRP, PacifiCorp presented the scope, methodology, and draft results from its demand-side management potential assessment at the August 25-26, 2016 public input meeting. Results of energy efficiency modeling were included in public meeting presentations of IRP portfolios beginning in January 2017 and the final demand side management (DSM) potential assessment report was posted to PacifiCorp's website in February of 2017. In addition to the detailed potential assessment, the 2017 IRP report includes information on DSM resources in multiple chapters. Throughout the public input process for the 2017 IRP, PacifiCorp encouraged stakeholders to submit feedback forms "to better inform issues included in the 2017 IRP, including, but not limited to the process, assumptions, and analysis."[39] During the 2017 IRP, no Oregon party submitted a feedback form requesting additional discussion or detail regarding DSM potential or modeling.

[37] Staff Public Meeting Memo at 36, n. 80.
[38] Staff Public Meeting Memo at 37.
[39] Stakeholder feedback could be submitted through the following link: http://www.pacificorp.com/es/irp/irpcomments.html.

The IRP public input process is already sufficiently robust to address Staff's concerns with transparency into energy efficiency potential and modeling for the 2019 IRP rendering Staff's suggested modification to action item 4a unnecessary. PacifiCorp is willing, however, to continue to work with Staff to ensure the public input process for the 2019 IRP includes information to facilitate Staff's review of energy efficiency potential and modeling results.

C. Load Forecasting and Load and Resource Balance

Staff recommends that PacifiCorp monitor the relationship among economic drivers and load in future IRP forecasts.[40] PacifiCorp accepts Staff recommendation but notes that while there would be no net effect on the overall forecast, PacifiCorp has also committed to reflect efficiency gains for street lighting within the street lighting class and has recently taken steps to incorporate this into future IRP forecasts.

Staff also recommends that additional forecast drivers in PacifiCorp's street light forecast could help more accurately model energy savings due to customers switching to light emitting diodes (LEDs) and that PacifiCorp consult with ETO based on their experience incentivizing LED street lights. Because ETO incentivized savings are applied to regression results, including an additional variable within the regression to account for energy savings due to LED adoption, could potentially result in double counting the impact of LED adoption. PacifiCorp acknowledges, however, that additional research on the subject is warranted and commits to discussing the topic with ETO staff. Of note, street lighting accounts for a small proportion of PacifiCorp's load, accounting for 0.3 percent of system-wide load in 2017.

[40] Staff Public Meeting Memo at 43.

D. Modeling and Portfolio Approach and Results

Staff recommends that PacifiCorp investigate a more diverse renewable portfolio in future IRPs and IRP updates.[41] As seen in the Supply-Side Resource Table of the 2017 IRP, PacifiCorp considered several diverse renewable resources for portfolio selection.

Staff also recommends that PacifiCorp rerun its model with the assumption that the Environmental Protection Agency's regional haze litigation would be successful.[42] PacifiCorp already provided this scenario with the reference case scenario in the 2017 IRP analysis process. PacifiCorp based its assumptions for each unit in the reference case on known court decisions that impacted a unit's compliance litigation, any settlement decisions available to inform PacifiCorp's 2017 IRP, and regional haze compliance requirements, including the installation of environmental control technology in the event that litigation outcomes require installations.

E. Stochastic Parameters

Staff states that it appreciates PacifiCorp's detailed explanation of how distributions were chosen and how seasonal and regional correlations were developed.[43] Staff encourages the company in IRP updates to clearly explain the reasons for the (sometimes) low correlations in the short-term forecast. PacifiCorp includes a detailed description of its stochastic parameters and their development in Volume II, Appendix H of the 2017 IRP. While PacifiCorp discusses its short-term correlation estimation process and calculation, the presented results do not include descriptions of the reason for sometimes low correlation commented on by Staff. PacifiCorp is

[41] Staff Public Meeting Memo at 44.
[42] Staff Public Meeting Memo at 44.
[43] Staff Public Meeting Memo at 45.

open to including explanations for sometimes low correlation in the short-term forecast as relevant for future IRPs.

F. Flexible Reserve Study (FRS)

Staff supports PacifiCorp's 2017 IRP FRS results and attribution of different levels of regulation reserve to load, wind, solar and non-variable energy resources.[44] Staff believes the modeling strategy to be reasonable and is satisfied with the data used by PacifiCorp and also finds the scaling factors applied to be appropriate. Staff recommends that PacifiCorp model natural gas and storage for meeting FRS needs in the next IRP update.[45]

PacifiCorp notes that the supply-side resource table used in the IRP already includes a variety of natural gas and storage resources, which can help meet the flexible reserve obligations associated with the company's portfolio. PacifiCorp recognizes, however, that while the IRP models include flexible reserve obligations, they may not capture all of the value associated with flexible resources such as natural gas and energy storage resources, particularly intra-hour. For instance, flexible resources can provide additional net benefits when dispatched in the Energy Imbalance Market or when they defer transmission and distribution system upgrades. PacifiCorp intends to further explore where possible, the additional benefits and resource potential for various flexible resource applications in future IRPs.

G. Distribution System Planning

Staff recommends that the company work with Staff to define a proposal for a generic investigation into distribution system planning.[46] PacifiCorp acknowledges that there may be

[44] Staff Public Meeting Memo at 46.
[45] Staff Public Meeting Memo at 47.
[46] Staff Public Meeting Memo at 47.

value if the IRP process included some distribution system planning inputs, particularly related to distributed energy resource forecasting into the IRP process may have value. PacifiCorp maintains, however, the importance of the distinct and separate nature of distribution system planning and long-term resource planning and emphasizes the need to keep these two planning processes separate. PacifiCorp is willing to further explore with Staff how distribution system planning activities are communicated and reported.

H. Smart Grid Report

Staff recommends that PacifiCorp work with Staff to explore the use of advanced metering infrastructure (AMI) data in its IRP.[47] In its reply comments, PacifiCorp discussed the potential benefits of AMI data and its commitment to continue to evaluate AMI data and associated analytics as an opportunity to leverage additional AMI value in Oregon. PacifiCorp will continue to evaluate and assess uses for the AMI data including its use in planning and resource applications. It is premature to provide additional detail regarding the use of AMI data in planning and resource applications until the breadth of the data analytics and its value can be adequately explored.

I. Compliance with Order 16-174 (Capacity Value of Existing QFs)

Staff recommends that PacifiCorp either comply with Order No. 16-174 in docket UM 1610 immediately, or explain to the Commission why it cannot comply.[48] Staff provides no explanation of why it believes PacifiCorp has not complied with Order No. 16-174. PacifiCorp has explained in its reply comments how it complied with Order 16-174 and therefore already

[47] Staff Public Meeting Memo at 48.
[48] Staff Public Meeting Memo at 50.

satisfies Staff's recommendation. In docket UM 1610, the Renewable Energy Coalition (Coalition) and several other parties recommended that avoided costs account for the capacity value provided by existing qualified facilities (QFs).[49] The Coalition argued that PacifiCorp's IRP modeling improperly assumed that QFs will renew their contracts, thereby extending PacifiCorp's resource sufficiency period, without compensating the existing QFs for allowing PacifiCorp to defer future resource acquisitions.[50] In Order No. 16-174, the Commission directed PacifiCorp to work with the parties to address this issue in its 2017 IRP.[51]

As PacifiCorp communicated to stakeholders during the public input process—and as acknowledged by the Coalition[52]—the 2017 IRP no longer assumes that QF contracts are renewed.[53] As a result, the deficiency period in the 2017 IRP is based on the assumption that existing QFs will not renew their contracts. When an existing QF renews its contract, it will receive the same capacity payment that would be received by a new QF. The Commission has already found that this fully compensates QFs for their capacity contributions;[54] therefore, PacifiCorp's 2017 IRP complies with Order No. 16-174.

IV. CONCLUSION

PacifiCorp's 2017 IRP complies with the Commission's existing IRP framework and guidelines. The 2017 IRP is supported by robust portfolio modeling and prudent planning

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[49] *In the Matter of the Public Utility Commission of Oregon Investigation into Qualifying Facility Contracting and Pricing*, Docket No. UM 1610, Order No. 16-174 at 19 (May 13, 2016).
[50] *Id.*
[51] *Id*.
[52] The Coalition submitted written feedback to PacifiCorp during its IRP public input process in which it stated: "We asked, at an IRP stakeholder meeting, about the Company's assumption regarding the renewal of QF contracts. In all past IRPs, including the last IRP (LC 62) PacifiCorp assumed that all small existing QF contracts renew and stay in the existing resource stack. **PacifiCorp has changed their assumption in this 2017 IRP, and is now assuming that they do not renew.**" http://www.pacificorp.com/content/dam/pacificorp/doc/Energy_Sources/Integrated_Resource_Plan/2017_IRP/RECComments_FeedbackForm_02_21_17.pdf (emphasis added).
[53] To be clear, in prior IRPs, PacifiCorp assumed that large QFs would not renew their contracts. Thus, in the 2017 IRP, both large and small QF contracts are treated the same.
[54] Order No. 16-174 at 19.

assumptions that lead to selection of a least-cost, least-risk preferred portfolio and includes an action plan that is consistent with the long-term public interest. PacifiCorp appreciates the comments received from an active and engaged stakeholder group. PacifiCorp requests that the Commission acknowledge the 2017 IRP and the 2017 IRP action plan.

Respectfully submitted this 28th of November, 2017

Etta Lockey
Vice President, Regulation
PacifiCorp d/b/a Pacific Power

CERTIFICATE OF SERVICE

I certify that I electronically filed a true and correct copy of **PACIFICORP'S RESPONSE TO STAFF'S PUBLIC MEETING MEMORANDUM** on the parties listed below via electronic mail in compliance with OAR 860-001-0180.

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Dated November 28, 2017.

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