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October 30, 2017

Via Electronic Filing

Public Utility Commission of Oregon
Attn: Filing Center
201 High St. SE, Suite 100
Salem, OR 97301

Re: In the Matter of PACIFICORP's 2017 Integrated Resource Plan
Docket No. LC 67

Dear Filing Center:

Please find enclosed the redacted version of the Comments of the Industrial Customers of Northwest Utilities on Staff's Recommendations in the above-referenced docket.

The confidential portions of this document are being handled pursuant to Protective Order No. 16-461 and will follow to the Commission via Federal Express.

Thank you for your assistance. If you have any questions, please do not hesitate to call.

Sincerely,

/s/ Haley M. Thomas
Haley M. Thomas

Enclosure

CERTIFICATE OF SERVICE

I HEREBY CERTIFY that I have this day served the confidential portions of the **Comments of the Industrial Customers of Northwest Utilities** upon the parties shown below by mailing a copy via First Class U.S. Mail, postage prepaid.

Dated at Portland, Oregon, this 30th day of October, 2017

Sincerely,

/s/ Haley M. Thomas
Haley M.Thomas

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BEFORE THE PUBLIC UTILITY COMMISSION

OF OREGON

LC 67

In the Matter of	)	
	)	INDUSTRIAL CUSTOMERS OF
PACIFICORP, dba PACIFIC POWER,	)	NORTHWEST UTILITIES' REDACTED
	)	COMMENTS ON STAFF'S
2017 Integrated Resource Plan.	)	RECOMMENDATIONS
	)	

I. INTRODUCTION

Pursuant to the Ruling of Administrative Law Judge ("ALJ") Rowe in this proceeding,[1/] the Industrial Customers of Northwest Utilities ("ICNU") submits the following comments on Public Utility Commission of Oregon ("OPUC" or the "Commission") Staff's Recommendations regarding PacifiCorp's (or the "Company") 2017 Integrated Resource Plan ("IRP"). In short, ICNU strongly supports Staff's recommendation that 2017 IRP Action Items 1a, 1b, and 2a not be acknowledged by the Commission. Alternatively, ICNU also supports Staff's recommendation, if the foregoing Action Items are acknowledged, that the Commission adopt significant customer protections to ensure that the risks associated with these Action Item investments are not unfairly passed on to Oregon ratepayers.

II. COMMENTS

ICNU appreciates this opportunity to submit comments, and particularly ALJ Rowe's invitation for parties to comment "on Staff's Recommendation."[2/] That is, Staff has

1/ Ruling (Sept. 21, 2017).
2/ Id.

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taken a leadership role, exhibited by the depth and substance of its analysis and commentary throughout this proceeding, which merits commendation and specific discussion. Staff's consistent expressions of serious concern over risks associated with massive Energy Vision 2020 investment, supported by thorough quantitative analysis and comprehensive citation to decades' worth of OPUC precedent, do much to secure the public trust.

Conversely, the Company's actions and presentations over the course of the 2017 IRP process could hardly stand out in brighter contrast, in terms of the constancy and certainty displayed by Staff. Indeed, from the eleventh-hour surprise insertion of a $3.5 billion Energy Vision 2020 investment plan within the 2017 IRP,[3/] to a full-fledged U-turn regarding the fundamental nature of the Energy Vision 2020 projects (i.e., from pure "opportunity" to alleged "need"),[4/] PacifiCorp has introduced uncertainty and heightened concerns among customers—at least so far as the 2017 IRP and associated processes are concerned.

Staff's Final Comments and Recommendations on the Company's 2017 IRP are sufficiently comprehensive and persuasive, in the context of Action Items 1a, 1b, and 2a (if not more), such that ICNU will not attempt to restate all the many points of agreement. Rather, the

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3/ See, e.g., Staff's Initial Comments at 1 (June 23, 2017) (noting "that the Company drastically altered its Action Plan to include" what would later be branded "Energy Vision 2020" investment plans, "at the end of" what was expected to be a transparent 2017 IRP public input process); Comments of the Oregon Citizens' Utility Board at 1-2 (June 23, 2017) ("The public and stakeholder engagement process went on for eight months without stakeholders even knowing the actual resource investments that the Company was considering"); Opening Comments of Oregon Department of Energy at 10 (June 23, 2017) ("In only a few months, between late January and early April 2017, the preferred portfolio changed in many aspects that had not been discussed at previous public meetings …. ODOE is concerned there are risks in the preferred portfolio that are not adequately analyzed nor addressed in the IRP").

4/ Staff Final Comments at 15-19 (Oct. 6, 2017).

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comments below are designed to enhance and expand upon the excellent work and appropriate recommendations of Staff.

Before proceeding into detailed issue commentary, however, ICNU respectfully requests that the Commission consider a broader procedural matter, as deliberations within the OPUC are set to begin in earnest. ICNU fully appreciates that the Commission acts in a "quasi-legislative" capacity in various settings, and even when making certain determinations associated with rates.[5/] Nevertheless, ICNU understands that the Commission prioritizes "openness" when conducting any of the OPUC's varied functions (including those of a "quasi-legislative" nature), which the Commission defines as reflective of "the obligation to make and explain decisions in a visible manner so that the public can have trust that Commission decisions are arrived at in a principled way."[6/]

To be sure, the Commission describes its very mission in terms of ensuring "just and reasonable rates" for Oregon utility customers, "through robust and thorough analysis and independent decision-making conducted in an open and fair process."[7/] The fact that the Commission describes itself as "honest, transparent, trustworthy, and consistent," under the core value of "Integrity,"[8/] also gives confidence to ICNU and Oregon customers that even quasi-legislative decisions will be made in a forthright, principled, and publicly transparent manner.

5/ See, e.g., Re OPUC, Internal Operating Guidelines, Docket No. UM 1709, Order No. 14-358, App. A at 5 (Oct. 17, 2014); Gearhart v. OPUC, 356 Or 216, 221 (2014).

6/ Docket No. UM 1709, Order No. 14-358, App. A at 1.

7/ OPUC Mission, Values, Actions, available at: http://www.puc.state.or.us/Pages/about_us.aspx.

8/ Id.

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Yet, any member of the public might be naïve not to consider that tremendous political pressure may also be exerted on the Commission to acknowledge Action Items associated with Energy Vision 2020, and to consider Staff's recommendations as the practical equivalent to an anti-environmental "referendum on renewable energy."[9/] Accordingly, in the face of such likely outside political pressure, which may not be at all transparent or understood by members of the public or the Company's Oregon utility customer base, the Commission's core values of integrity and openness will be crucial in reaching a principled and transparent decision on contested IRP Action Items. In this regard, ICNU looks hopefully to the Commission to exhibit the same leadership on display by its Staff in conducting an independent decision-making process—especially as the December 2017 timing of the Commission's acknowledgment decisions means that the OPUC will necessarily be assuming a leadership position among commissions, by making the first major determination on Energy Vision 2020 in any of six states in which PacifiCorp operates.

As Staff has rightly explained, to interpret Staff's recommendation *not* to acknowledge Action Items 1a, 1b, and 2a "as a referendum on renewable energy …. [W]ould be incorrect and misunderstands the IRP as a tool."[10/] Instead, the proper use of the IRP is as "… a tool to help identify and determine the amount and timing of any new resource acquisition that best serves the *needs* of utility customers."[11/] ICNU fully agrees with Staff, however, that

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[9/] Staff Final Comments at 3.

[10/] Id.

[11/] Id. (emphasis added). Staff's warning about the "[r]isk of setting precedent" in an IRP context is particularly compelling, as Staff demonstrates that recent emphasis upon economic opportunities, distinct from resource need, is creating new levels of customer risk "in real-time." Id. at 23-25

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PacifiCorp "has failed to demonstrate there is a need for the large capital investments" related to Energy Vision 2020, "… which is a prerequisite to *compelling customers to take on the risk* associated with utility investment."[12/]

As the Commission surely knows, nothing will prevent PacifiCorp from pursuing all Energy Vision 2020 investment plans, even if Action Items 1a, 1b, and 2a are not acknowledged.[13/] On the other hand, acknowledgement could have significant effects on later evidentiary deliberations, concerning the recovery of Energy Vision 2020 costs in rates: "Acknowledgment of an IRP … is relevant to subsequent examination of whether a utility's resource investment is prudent and should be recovered from ratepayers."[14/] Thus, as Staff succinctly observes, the stakes for captive PacifiCorp customers are enormously high if these disputed Action Items are acknowledged: "… these customers may have no choice but to pay for any new resources for decades to come."[15/]

In sum, notwithstanding potential political considerations, which should not factor in an open and independent decision-making process in this docket, there is *nothing* to be lost for Company or customer by a decision not to acknowledge Action Items 1a, 1b, and 2a. Tremendous ratepayer risk and future harm is implicated, however, by acknowledgment of those same items. ICNU urges the Commission to keep this dichotomy squarely in view, when

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12/ Staff Final Comments at 3 (emphasis added).

13/ See Re Investigation Regarding Competitive Bidding, Docket No. UM 1182, Order No. 06-446 at 2 (Aug. 10, 2006) (affirming "utility management's prerogative to acquire new resources").

14/ Re PacifiCorp 2015 IRP, Docket No. LC 62, Order No. 16-071 at 2 (Feb. 29, 2016).

15/ Staff Final Comments at 4. See also id. at 28 ("Traditionally, acknowledgment of a resource in an IRP has been interpreted as a step towards a demonstration of prudence for cost recovery in a ratemaking proceeding").

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reviewing and ultimately reaching determinations on Staff's Recommendations, these comments, and all other comments presented in this proceeding.

A. Staff Appropriately Focuses Attention on PacifiCorp's Insufficient Demonstration of Resource Need

In multiple dockets, ICNU has pointed out that the Company's $3.21 billion Energy Vision 2020 investment plans are driven purely by economic opportunity motives, rather than any sort of resource "need" appropriate for Commission acknowledgement in either an IRP or Request for Proposals ("RFP") setting—regardless of whether the question of "need" is considered in a reliability, capacity, energy, or even a renewable portfolio standard context.[16/] Staff has more than adequately established the same truths, via both detailed examination of the Company's own statements and abundant citation to OPUC precedent,[17/] including reference to some of the same PacifiCorp admissions.[18/]

Accordingly, in keeping with its own initial recommendations in this docket,[19/] ICNU fully concurs with Staff's recommendation that the Commission should not acknowledge 2017 IRP Action Items 1a, 1b, and 2a. The following analysis is offered to provide additional

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16/ See, e.g., Opening Comments of ICNU at 3-9 (June 23, 2017); Re PacifiCorp, RFP for Resources Identified in 2017 IRP, Docket No. UM 1845, Comments on Draft RFP of ICNU at 6-9 (Aug. 18, 2017); Re OPUC, Investigation to Examine PacifiCorp's Non-Standard Avoided Cost Pricing, Docket No. UM 1802, ICNU/200, Mullins/1-3.

17/ See Staff Final Comments at 12-19, 23-25.

18/ Compare Staff's Final Comments at 17 (quoting Docket No. UM 1802, PAC/300, MacNeil/26 (noting and discussing the Company's admission that "without those [production tax credits ("PTC")] benefits, the Wyoming wind would not be a part of PacifiCorp's least-cost, least-risk plan to reliably meet system load"), with Docket No. UM 1802, ICNU/200, Mullins/1-2, and Docket No. UM 1845, Comments on Draft RFP of ICNU at 6-7 (emphasizing the same PacifiCorp admission to demonstrate the lack of actual resource "need" and that economic benefits associated with PTCs are the critical driving force behind the Company's 2017 IRP action plan).

19/ E.g., Opening Comments of ICNU at 9-10; Comments on Energy Vision 2020 Update of ICNU at 1-2 (Aug. 24, 2017).

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information as to why acknowledgment of these Action Items would be inappropriate, at least without the addition of meaningful acknowledgment conditions "to mitigate risk to customers in the context of economic opportunity-driven resource acquisition."[20]

Demonstration of a clear resource need is not an insignificant consideration within the context of new resource additions, such as those the Company proposes. Large investments in new production and transmission plant are an inherently risky activity, and the financial risks to ratepayers associated those investments go beyond just the types of price and operating risks that may be reasonably quantified in the context of least-cost, least-risk integrated resource planning. There is great risk associated with deploying the significant sums of capital the Company proposes, and that is why the Company is entitled to a return on its investment in excess of risk-free rates. As Staff has properly identified, ratepayers are captive to the capital costs of the investment, and thus, bear the risk of ensuring that the capital can be repaid in a reasonable period of time—including a provision for the Company to earn a return on its investment, commensurate with the underlying financial risk.

If a resource need has been demonstrated, however, the financial risk associated with large investments is not relevant, since it is mandatory that some resource be built to address the future reliability need. If a resource need has been demonstrated, ratepayers must take on some degree of financial risk to address the reliability issue. Accordingly, the underlying resource decision can be reasonably made by determining the resource that addresses the reliability need at the least cost, in consideration of price, and other operating, risks.

20/ Staff Final Comments at 3.

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In contrast, the additional financial risk to ratepayers associated with being obligated to repay the huge sums of capital investment costs is relevant when a resource is pursued on the basis of economics. An appropriate analogy of this risk is to compare the risk of a mortgage on a primary residence versus that on a rental property. An individual may be willing to take on the risk associated with a mortgage on a primary residence, simply because he or she *needs* a place to live. The individual must take on that risk irrespective of the residence that is acquired. In contrast, the risk associated with taking out a mortgage on a rental property would be materially different than the risk associated with a mortgage on a primary residence. A rental property is justified on the expectation of generating income sufficient to repay the mortgage, and thus, involves greater financial risk.

The Company purports that these wind projects will reduce costs to customers, as measured under the present value revenue requirement ("PVRR") standard, by $85 to $111 million over the 20-year IRP period.[21/] As discussed below, these economics are based largely on speculative and unfounded assumptions. Notwithstanding, even if it were determined that a project might reduce costs, that does not render the project needed for reliability purposes. Accordingly, when dealing with the Energy Vision 2020 projects, the planning consideration is fundamentally different than when addressing a clearly defined reliability need.

The fact that Energy Vision 2020 is not needed to address a reliability need is evident from the fact that the Company will not realize a near-term reliability shortfall, if the proposed resources are not built. Table 5.14 of the IRP clearly shows that available front office

21/ PacifiCorp's Informational Filing at 23, Table 4.1 (July 28, 2017).

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transactions of 1,670 MW exceed the system position by a wide margin through the first ten years of the study period.[22/] Accordingly, the proposal cannot be reasonably characterized any other way than as an economic tradeoff between existing market resources and the new wind and transmission.

The Company argues that, since the new wind will displace market resources, the new wind is fulfilling a resource need.[23/] That argument, however, is false, and as noted above, contradictory to the Company's prior characterizations of the projects. The market represent a resource that ratepayers have access to today. The mere fact that individual market transactions have not yet been made does not mean that the market should be disregarded when determining whether there is a need for the Company to invest large sums of capital. Access to these market resources in not achieved without cost. Ratepayers have invested significantly to obtain access to those markets. It requires expensive transmission rights, as well as an extensive trading operation, in order to maintain access to these market resources.

From this perspective, the Energy Vision 2020 project is more appropriately viewed as a discretionary, economic project. Just as a reasonable individual would only invest in a rental property if provided with a high degree of confidence that the investment will produce positive income, ICNU recommends that the Commission only consider economic projects which produce economic results that are overwhelmingly positive. Thus, the threshold for approving the Energy Vision 2020 project should be relatively high, in comparison to a resource justified on the basis of a demonstrated resource need. And, when viewed against a heightened

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22/ PacifiCorp 2017 IRP, Volume I at 91.
23/ PacifiCorp 2017 IRP, Public Utility Commission of Oregon Workshop at 3 (Sept. 14, 2017).

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standard, it is clear there is not an overwhelming economic case for investing in the Energy Vision 2020 projects.

B. ICNU Has Also Found Notable Flaws in the Company's Modeling Assumptions

In support of the recommendation that the Commission not acknowledge Action Items 1a, 1b, and 2a, Staff has identified numerous analytical and modeling deficiencies in the Company's 2017 IRP.[24/] ICNU shares the concerns identified by Staff, and offers the Commission further analysis to demonstrate that acknowledgement of Energy Vision 2020 Action Items should not be granted.

Upon examination of the assumptions the Company used to inform its analysis, it is apparent that the economics of Energy Vision 2020 are not promising, and that there is not an overwhelming economic case for deploying the significant underlying capital. In fact, the data suggests that it is more likely that these projects will end up costing ratepayers in the long run. In Table 1, below, I detail the impact of peeling away some of the speculative assumptions in the Company's analysis.

24/ See Staff Final Comments at 19-23, 25-26.

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Confidential Table 1

Impact of Assumptions on Energy Vision 2020 Economics ($millions)

Company Identified Benefit		**$ 85 - $ 110**
Impact of Speculative Assumptions:		
Updated Price Curve	(-) $ 19	
Supplemental GRID Studies	(-) $ 65	
Wholesale Transmission Revenu[redacted]	[redacted]	
Transmission Costs	[redacted]	
Wind Integration Costs	(-) $ 72	
Tax Reform	(-) $ 95	
Aggregate Impact		**(-) $ 414**

1. Forward Price Curve

The Company's analysis recognizes that market prices are a key driver of the project economics.[25/] The Company's analysis is based on the Official Forward Price Curves ("OFPC") dated April 26, 2017.[26/] If actual prices are lower than expected, it will have the effect of reducing the economics of Energy Vision 2020. Notwithstanding, over the five months since the April OFPC was issued, prices have changed. In fact, based on changes to the Mid-Columbia market, I estimate the impact of the declining OFPC to be approximately $19.3 million.

The fact that the price curve has declined, however, is not an unsurprising result. Forward prices in power and gas markets have the attributes of contango market, a condition

25/ PacifiCorp's Informational Filing at 23, Table 4.1.
26/ Id. at 7.

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where forward prices tend to be higher than the ultimate settled prices. Thus, the forward curves tend to be upward sloping, and as each new curve is issued, the prices tend to be revised downward, as the upward sloping curve is revised into the future. As ICNU demonstrated in Docket No. UE 308, the upward-sloping forward curves used by utilities consistently over-estimate ultimate prices, and the over-estimation increases in significance the farther into the future the estimate goes.[27/] Thus, making an economic resource decision based almost entirely upon a trade-off against distant forward prices carries an exceptional degree of risk, since there is an expectation that the curves will overstate future prices.

2. Supplemental GRID Studies

While it is not readily apparent from the body of the document, as a part of the Company's July 28th Informational Filing, the Company performed some supplemental GRID studies where it quantified additional benefits of about $64.5 million, on a net PVRR ("NPVRR") basis, over a 20-year period. The studies were used to quantify the aspects of the Company's proposal related to reduced line losses, reliability benefits, and EIM benefits.[28/]

The Company clarified, in response to ICNU Data Request 16—included as Attachment A to these comments —that these studies were used to apply a separate outside-the-model adjustment to improve the overall economics of the Energy Vision 2020 project[29/]. Generally, ICNU has significant concerns with these often one-sided, out-of-model adjustments.

27/ In re Portland General Electric Company 2017 Annual Power Cost Update Tariff, Docket No. UE 308, ICNU's Opening Brief at 13-14 (Oct. 3, 2016).
28/ PacifiCorp's Informational Filing at 13-14.
29/ Attachment A at 1.

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With respect to line losses, ICNU expects that the addition of new resources in remote areas of Wyoming would actually increase line losses, in contrast to resources at locations nearer to loads. While the lines themselves may have improved loss ratings, adding more resources to remote locations on the Company's system causes more power to flow over long distances, subjecting more power to transmission level losses. Plus, ratepayers have no way to ensure that the line loss reductions are actually achieved.

With respect to the additional EIM benefits, ICNU is concerned with this aspect of the Company's analysis because the benefits associated with the EIM are being modeled in GRID in a way that is completely different than the way that EIM benefits are established when setting power costs in the Company's annual TAM filings. In the GRID studies prepared in the Company's July 28th Informational Filing, the Company modeled the entrance of Idaho Power into the EIM by increasing the transfer capability between Jim Bridger and Walla Walla by 200 MW. Thus, the GRID model was configured to allow additional transfers of power from Jim Bridger into the Northwest, even though the Company does not have transmission rights to accommodate those transfers. In the 2017 TAM filing, this additional 200 MW of transfer capability was not modeled even though Idaho Power will join the EIM in April 2018. This mismatch demonstrates a common problem. The Company is more than willing to forecast benefits when justifying a major investment, yet when it comes to setting rates, the Company is often reluctant to model any of the anticipated benefits.

Finally, ICNU also has concerns with the assumptions related to reduced transmission system outages. From ICNU's perspective, this aspect of the analysis is flawed

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because the Company does not model the cost of transmission outages in the base scenarios. Thus, the Company is forecasting reduced costs related to transmission outages without modeling the cost of those outages in its base case.

Taken as a whole, these supplemental analyses are hardly a basis to justify such a significant resource addition. Yet, in the Company's analysis, they would comprise nearly the entirety of the benefits forecast in the base case scenario.

3. Wholesale Transmission Revenues

The Company assumes that, in connection with the Aeolus to Bridger segment, it will receive about $[redacted] million, on a NPVRR basis, of associated incremental transmission revenues over the 20-year period.[30/] ICNU performed discovery with respect to these incremental benefits in Data Request 017. In response to that data request, the Company describes these additional revenues as the revenue requirement for these transmission investments, which will be partially offset by incremental revenue from other transmission customers[31/].

The Company's analysis, however, was highly simplified, and does not represent the way that the formula rates actually work. The Company simply assumed that 12% of the new investment would be funded by Open Access Transmission Tariff ("OATT") customers, based upon the historical percentages of transmission revenue requirement that was funded by OATT customers. But, the Company did not perform a rigorous analysis of how the amount of

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30/ Calculated from the Company's confidential workpaper "Energy Gateway GM 2017 03 13 w Bonus", Tab "Gateway", Column "G."

31/ Attachment A at 2-3.

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costs allocated to OATT customers will change as a result of the project. In fact, it is possible that the transmission line could have the exact opposite effect on the amounts allocated to OATT rates.

What the Company's analysis fails to account for is the fact that when the Energy Vision 2020 project is constructed, it will require the Company's merchant operations to maintain additional network or point-to-point capacity in order to utilize the wind facilities. When this additional capacity is acquired, it will dilute the percentage of costs allocated to OATT customers, resulting in additional cost being allocated to retail customers. The amount of this benefit is comparable to the overall amount of benefits expected under the base case scenario. Notwithstanding, this assumption was made with little rigor and is fundamentally inconsistent with how the new project will impact the costs borne by retail customers. Once again, this speculative assumption is hardly a basis to justify the significant investment that the Company proposes, yet the preponderance of alleged benefits could be attributed solely to this assumption.

4. Cost Assumptions

The total capital required for the Aeolus to Bridger/Anticline transmission project is forecast to be about $[redacted] million.[32/] Given the large magnitude, even small changes to this cost assumption have the effect of eliminating the positive economics of the project. In response to ICNU Data Request 21, the Company estimated the accuracy of this assumption to be within

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32/ See the Company's confidential workpaper "Energy Gateway GM 2017 03 13 w Bonus", Tab "Summary", Cell "G26."

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plus, or minus, 15% of actual spending[33/]. That is a range of approximately $97 million above and below the Company's estimate. That magnitude of error would eliminate any favorable economics associated with the project.

The Company also makes some assumptions regarding operating expenses. In response to ICNU Data Request 20 for example, the Company identifies an assumption in its model to include $1 million of incremental operations and maintenance expenses associated with the new transmission project.[34/] When requested to substantiate this estimate, the Company noted that it had no supporting workpapers for the estimate, and therefore, no basis to refute that incremental operating expenses might be substantially higher than its estimate.

5. Integration Costs

The Company includes integration costs of approximately $0.63/MWh, which is materially lower than values that have been assumed in the past, including recently in the context of setting power cost rates in the Oregon Transition Adjustment Mechanism ("TAM") proceeding. In response to ICNU Data Request 18, the Company explained the derivation of this number, and why it is materially lower than the values used in the TAM.[35/]

In the 2017 TAM, for example, the Company includes intra-hour and inter-hour wind integration costs based on the 2014 Wind Integration Study. While in response to ICNU Data Request 18, the Company was unwilling to estimate the intra-hour wind integration costs assumed in the 2017 TAM, the Company has previously estimated that intra-hour wind

33/ Attachment A at 7.
34/ Attachment A at 6.
35/ Attachment A at 4.

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integration costs modeled in GRID, based on the 2014 Wind Integration Study, to be $2.35/MWh.[36/] In addition, the Company identified inter-hour wind integration costs included in the 2017 TAM of approximately 0.75/MWh.[37/] Of note, the Company's economic analysis related to Energy Vision 2020 includes no inter-hour wind integration costs.

If the 2017 TAM wind integration costs were used, it would reduce the economics of the Energy Vision 2020 project by approximately $72 million. Once again, when justifying these types of investments, the Company is more willing to include beneficial modeling adjustments. Yet, when it comes to forecasting those adjustments in rates, the Company resorts to more draconian modeling techniques.

6. Tax Reform

Much of the benefits of the strategy comes in the form of tax benefits. Notwithstanding, if tax reform is approved, the benefit of favorable tax provisions will likely be diminished. This is a significant risk associated with the project and, in response to ICNU Data Request 019, the Company estimated that, if tax reform is approved, it will reduce the project economics by $93 to $97 million.[38/] Thus, any projected benefits could be entirely eliminated if congressional efforts associated with tax reform are advanced.

36/ See e.g., In The Matter of the Application of Rocky Mountain Power for Authority of a General Rate Increase in Its Retail Electric Utility Service Rates in Wyoming of $32.4 Million Per Year or 4.5 Percent, Wy.PSC, Docket No. 20000-469-ER-15, Direct Testimony of Bradley G. Mullins at 63, Table BGM-6.

37/ Attachment A at 4.

38/ Attachment A at 5.

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Taking all of these speculative assumptions into consideration, it is clear that the Energy Vision 2020 project is hardly a slam-dunk, as the Company would imply. If these speculative assumptions are stripped away, the project can hardly be viewed as being economic.

C. Staff's Recommendations for Conditions Are Sound, if Acknowledgment Is Granted

Like Staff, ICNU "does not recommend a deviation from a need-based IRP standard" to accommodate Energy Vision 2020 investment, and similarly "recommends against acknowledging Action Items 1a, 1b, and 2a."[39/] Nonetheless, should the Commission choose to acknowledge these Action Items, ICNU also "urges the Commission to provide detailed guidance on how it anticipates [that] it will evaluate these economic opportunities when PacifiCorp seeks rate recovery."[40/]

Better still, ICNU supports Staff's specific recommendation for the plain articulation of "… strong protections that *hold ratepayers harmless* for the unnecessary risk and potential cost of the economic opportunity in a subsequent ratemaking proceeding."[41/] Staff's recommendation here is far from radical. In fact, the Oregon Independent Evaluator ("IE"), chosen for the Company's Energy Vision 2020 RFP, has similarly proposed: "If PacifiCorp receives approval to complete the gateway Segment D2 Project, but misses the Commercial Operations Date ("COD") of the project, *ratepayers* and bidders *should be held harmless*."[42/]

39/ Staff Final Comments at 28.

40/ Id.

41/ Id. (emphasis added).

42/ Docket No. UM 1845, IE Assessment at 6 (emphasis added). See also id. at 12 ("Should the Transmission Project's COD slip beyond the date by which winning projects must come online to recover the PTC, PacifiCorp should *hold ratepayers harmless* by not passing any increased costs through to ratepayers") (emphasis added).

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The IE made this recommendation in conjunction with a finding that Action Item investment "benefits could be wiped away by cost overruns on the transmission side," while also holding that "ratepayers should not bear the risk of any project not being able to claim the PTC."[43/]

As Staff notes, such protections will not "prevent resource development."[44/] That said, if Energy Vision 2020 investment is truly so risky that the Company would not dare venture into such development at shareholder risk, then the presence of such risk would only support the need for strong ratepayer protections. To this end, ICNU supports the two-fold recommendation of Staff to "… ensure that the risks associated with resources that are not needed, but may nonetheless represent an economic opportunity, are appropriately borne by project developers."[45/]

First, ICNU agrees that, in the "pre-COD phase," the Commission should "… set a construction-cost cap" to protect ratepayers.[46/] This sort of cost cap protection would be perfectly reasonable, since "the Company will be provided or will be able to produce detailed construction cost or purchase cost figures associated with" all Energy Vision 2020 investment, such that "any costs in excess of those the Company indicates customers could economically incur" would be unjustifiable.[47/]

Second, during "the post-COD period," the Commission should articulate that any acknowledgment comes with the expectation that "… project revenue is *at least* as

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43/ Docket No. UM 1845, IE Assessment at 15, 5.
44/ Staff Final Comments at 29.
45/ Id. at 44.
46/ Id.
47/ Id.

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favorable as modeled."[48/] As Staff has proposed, the Commission could implement such protection in a manner that will be both readily understandable and simple to administer—e.g., "… if actual revenues do not materialize as favorably as the model expected, it is the *modeled* revenues that are used in the Company's net power cost calculation."[49/] Again, this sort of protection would be eminently just, transparent, and reasonable, as it would "ensure that the anticipated revenue stream benefits [that] the customers were described" in any Action Item acknowledged by the Commission, on the basis of PacifiCorp representations, would be actually and fairly realized by ratepayers.[50/]

III. CONCLUSION

For the foregoing reasons, in addition to similar comments from both ICNU and Staff in this proceeding (and the associated RFP in docket UM 1845), ICNU strongly supports Staff's Recommendations on the Company's 2017 IRP. In particular, ICNU agrees that the Commission should not acknowledge Action Items 1a, 1b, and 2a. Alternatively, if Energy Vision 2020 investment is acknowledged, ICNU supports Staff's recommendation for the establishment of significant conditions designed to mitigate future ratepayer risk.

48/ Id. (emphasis added).
49/ Id. at 45.
50/ Id.

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Dated this 30th day of October, 2017.

Respectfully submitted,

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ICNU Data Request 0016

ICNU Data Request 0016

Reference the GRID studies provided to Mr. Mullins in response to ICNU Data Request 10. Please identify how the results of those studies are incorporated into the economics of the Company's proposal as developed using the IRP work papers.

Response to ICNU Data Request 0016

The line loss, transmission system derate, and energy imbalance market (EIM) transfer benefit adjustments identified in the Company's response to ICNU 0010 are incorporated into the 2017 Integrated Resource Plan (IRP) results. These adjustments are made out of the model and input into the "SO Model Summary Report" on tab "New FOM Adjustments." Please refer to pages 220 and 221 of Volume I of the 2017 IRP, Chapter 8 (Modeling Results).

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ICNU Data Request 0017

ICNU Data Request 0017

Reference the incremental wholesale transmission volumes and revenues that the Company has assumed in connection with completing the Aeolus to Bridger transmission segment:

(a) Please identify the amount of the referenced incremental transmission revenues assumed in the Company's analysis.

(b) Please provide work papers supporting the referenced incremental wholesale transmission volumes and revenues.

(c) Please explain how the referenced transmission segment will allow the Company to make more wholesale wheeling transactions.

(d) Does the Company have any existing requests for wholesale transmission service that it is unable to fulfill in the absence of the referenced transmission segment? If yes, please identify all such requests.

Response to ICNU Data Request 0017

PacifiCorp assumes the Industrial Customers of Northwest Utilities' (ICNU) reference to "wholesale transmission volumes and revenues" is to the Company's discussion of transmission-revenue credits related to the proposed Aeolus-to-Bridger/Anticline transmission line as discussed in the Company's 2017 Integrated Resource Plan (IRP) – Energy Vision 2020 Update filed with the Public Utility Commission of Oregon (OPUC) on July 28, 2017 (pages 12-13). Based on this assumption, the Company responds as follows:

(a) Please refer to Attachment E to the 2017 IRP – Energy Vision 2020 Update, specifically the rows "Incremental Transmission Revenue," which are the same for each price-policy scenario.

(b) Please refer to Attachment ICNU 0017 for the derivation of the range of percentages that served as the basis for the Company assuming transmission revenue credits tied to 12 percent of transmission revenue requirement. The calculation of revenue credits based the 12 percent assumption can be found in the confidential work papers supporting the 2017 IRP – Energy Vision 2020 Update, specifically folder "Transmission Projects," file "Energy Gateway GM 2017 03 13 w Bonus.xlsm," tab "Gateway."

(c) The Company has not assumed the Aeolus-to-Bridger/Anticline line will allow the Company to make more wholesale wheeling transactions nor does the Company anticipate that the proposed line will increase wheeling transactions.

(d) No, the Company does not have any pending third-party requests for wholesale *transmission service* that rely on the new transmission segment. There are, however, third-party requests for *interconnection service* that cannot be accommodated without significant investments in the transmission system, including the proposed Aeolus-to-Bridger/Anticline transmission line.

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ICNU Data Request 0018

ICNU Data Request 0018

Reference the integration costs assumed with respect to the Company's new wind proposal:

(a) Please identify the integration costs that the Company assumed in its analysis on a $/MWh basis.

(b) Please provide work papers supporting the integration cost assumptions used in the Company's analysis.

(c) Please identify the $/MWh cost of inter-hour wind integration included in the Company's July update in Docket UE 323, the 2018 Transition Adjustment Mechanism filing.

(d) Please identify the $/MWh cost of intra-hour wind integration included in the Company's July update in Docket UE 323, the 2018 Transition Adjustment Mechanism filing.

Response to ICNU Data Request 0018

(a) The wind integration cost is $0.57 per megawatt-hour ($/MWh), as reported in Volume II of PacifiCorp's 2017 Integrated Resource Plan (IRP), Chapter F (Flexible Resource Study), page 133, Table F.22 (2017 FRS Flexible Resource Costs as Compared to 2014 WIS Costs, $/MWh).

(b) Please refer to the public data disks that accompanied the 2017 IRP, specifically: Data Disk 1_PUBLIC\Chapters Appendix - Public.zip\Chapters Appendix\Appendix F - Flexible Reserve Study\, file "2017 Flexible Reserve Study Results.xlsx", which provide the supporting work papers.

(c) In Docket UE 323 (2018 Transition Adjustment Mechanism (TAM)), the inter-hour wind integration cost is $0.75/MWh, based on Volume II of PacifiCorp's 2015 Integrated Resource Plan (IRP), Chapter H (Wind Integration Study), page 100, Table H.3 (Wind Integration Cost, $/MWh), then adjusted for inflation rate.

(d) The Company is not able to explicitly calculate intra-hour wind integration cost. The Generation and Regulation Initiative Decision Tool (GRID) reflects perfectly optimized costs for an hourly period assuming load net of wind and solar generation remains unchanged at a single level for the whole hour. The GRID result does not include these additional within-hour costs because it does not include the within-hour variation in requirements or the constrained set of resources available to accommodate those changes.

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ICNU Data Request 0019

ICNU Data Request 0019

Has the Company performed any analysis to quantify the potential impacts of tax reform on the economics of its resource proposal? If yes, please provide all work papers supporting its analysis. If no, please explain why the Company believes that it is not necessary to consider such impacts.

Response to ICNU Data Request 0019

The Company performed a tax-policy sensitivity that is summarized in the Rebuttal Testimony of Company witness, Rick T. Link in Utah Docket 17-035-39. The sensitivity study assumes the current federal tax corporate income tax rate is reduced from 35 percent to 25 percent. Assuming a marginal state income tax rate of 4.54 percent less a federal deductibility benefit of 1.135 percent, the assumed net state tax rate is 3.405 percent. Based on these inputs, the effective combined federal and state income tax rate assumed for this sensitivity is 28.405 percent.

The table below summarizes the results of the sensitivity relative to an updated benchmark case, which reflects updated transmission, load forecast, price curve, and cost-and-performance assumptions. To assess the potential impact of a change in the federal corporate tax rate, the present value revenue requirement differential (PVRR(d)) results were calculated through 2036 based on the System Optimizer model (SO model) and the Planning and Risk (PaR) model results. The sensitivity results reflect updated medium natural gas and medium carbon dioxide (CO_2) price-policy assumptions.

Tax Policy Sensitivity
(Benefit)/Cost of Wind Repowering ($ million)

Model	Sensitivity PVRR(d)	Benchmark PVRR(d)	Change in PVRR(d)
SO Model	($45)	($138)	$93
PaR Stochastic Mean	($23)	($115)	$93
PaR Risk Adjusted	($24)	($121)	$97

Although the overall benefit of the wind repowering project is reduced by between $93 million to $97 million, the wind repowering project still produces net economic benefits for customers.

Please refer to Confidential Attachment ICNU 0019, which provides the SO and PaR study results related to this sensitivity.

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ICNU Data Request 0020

ICNU Data Request 0020

Please identify the amount of incremental operations and maintenance expense that the Company has assumed with respect to the new transmission segment, and provide work papers supporting the assumed amounts.

Response to ICNU Data Request 0020

The Company assumes incremental operations and maintenance (O&M) expense for the Aeolus to Bridger transmission line of $1 million per year in 2017 dollars. The Company does not have supporting work papers as this estimate is based on management judgment. Maintenance activities include:

- Line safety inspections
- Line detail inspections
- Corrective line maintenance
- Tower inspections
- Substation inspections
- Substation equipment maintenance: relay testing, breaker inspections
- Corrective substation maintenance

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ICNU Data Request 0021

ICNU Data Request 0021

Reference the capital cost of the proposed Aeolus to Bridger transmission segment:

(a) Please identify the total amount of capital cost that the Company has assumed with respect to the referenced transmission segment.

(b) Please provide an explanation of how the Company derived its capital cost estimate.

(c) Please provide work papers supporting its capital cost estimate, including itemization of each identified component of the estimated capital costs.

(d) Please identify any contingency that the Company has included in its estimate.

(e) Please identify any risks that the Company has considered which might cause the actual capital costs associated with building the referenced transmission segment to exceed the estimates the Company used in its analysis.

Confidential Response to ICNU Data Request 0021

(a) The Company estimates a total capital cost of [redacted] for the Aeolus-to-Bridger/Anticline 500/345 kilovolt (kV) transmission line.

(b) The Company developed the estimate using quantity models from the preliminary transmission line design with historical unit pricing from previous projects (adjusted for inflation as necessary). Substation estimates were derived from models of substation components and equipment based on conceptual one-line diagrams. Construction costs were estimated using historical unit prices and major equipment prices were evaluated by requesting budgetary quotes from manufacturers.

(c) The cost studies for the project contain commercially sensitive information and are considered highly confidential. The Company requests special handling. Public disclosure of this information before completion of the competitive bidding process in 2018 could negatively impact the responses from bidders with potential for the company to not secure the most cost-efficient proposal. Please contact Natasha Siores at (503) 813-6583 to make arrangements for review.

(d) The Company has presented the transmission cost estimate with a plus or minus 15 percent accuracy given the early nature of the estimate and pending finalization of the scope and approach. The estimate values used historical pricing from previous projects (adjusted for inflation as necessary), and the historical pricing units were from engineer, procure and construct (EPC) contracts and contained contractor contingencies representing such risks as soils, production rates, weather, environmental constraints. In addition, the Company prepared a risk evaluation to

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determine potential cost and schedule risks; the values determined from this process identified that the risk profile was within the overall accuracy of the project cost estimate.

(e) The risk/uncertainty assessments correlate closely to the cost study data and therefore could also impact the competitive bidding process if made public at this time. The Company considers this information commercially sensitive and highly confidential. The Company requests special handling. Please contact Natasha Siores at (503) 813-6583 to make arrangements for review.

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