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BEFORE THE PUBLIC SERVICE COMMISSION OF UTAH

In the Matter of the Voluntary Request of Rocky Mountain Power for Approval of Resource Decision to Repower Wind Facilities	**Docket No. 17-035-39**

PREFILED RESPONSE TESTIMONY AND EXHIBITS OF KEVIN C. HIGGINS

The Utah Association of Energy Users ("UAE") hereby submits the Prefiled Response Testimony and Exhibits of Kevin C. Higgins in this docket.

DATED this 2nd day of April 2018.

HATCH, JAMES & DODGE

/s/ Phillip J. Russell
Phillip J. Russell
Counsel for Utah Association of Energy Users

CERTIFICATE OF SERVICE

I hereby certify that a true and correct copy of the foregoing was served by email this 2nd day of April 2018 on the following:

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In the Matter of the Voluntary Request of Rocky Mountain Power for Approval of Resource Decision to Repower Wind Facilities	))))))	Docket No. 17-035-39

Response Testimony of Kevin C. Higgins

On Behalf of the

Utah Association of Energy Users

April 2, 2018

I. INTRODUCTION AND SUMMARY

Q. Please state your name and business address.

A. My name is Kevin C. Higgins. My business address is 215 South State Street, Suite 200, Salt Lake City, Utah, 84111.

Q. By whom are you employed and in what capacity?

A. I am a Principal in the firm of Energy Strategies, LLC. Energy Strategies is a private consulting firm specializing in economic and policy analysis applicable to energy production, transportation, and consumption.

Q. Are you the same Kevin C. Higgins who previously filed direct, rebuttal, and surrebuttal testimony in this proceeding on behalf of the Utah Association of Energy Users ("UAE")?

A. Yes, I am.

Q. What is the purpose of your response testimony?

A. My response testimony augments the testimony I filed previously in this case, taking into account both the rebuttal and supplemental filings made by Rocky Mountain Power ("RMP"), as well as additional developments and analysis that have occurred since the filing of my original testimony. Specifically, my response testimony addresses the request by RMP for the Commission to (a) determine that the Company's decision to replace or "repower" existing wind resources is prudent, (b) approve the Company's continued recovery of the

replaced wind plant equipment, and (c) approve the Company's proposed ratemaking treatment.[1]

Q. Please provide a summary of your primary conclusions and recommendations.

A. I recommend against approval of the repowering project. RMP's wind repowering proposal is not a typical utility investment proposition. The wind repowering project might best be described as an "opportunity" investment in that it seeks to take advantage of the availability of full Production Tax Credits ("PTCs") before the federal tax credit program begins to phase out. Since it is an opportunity investment, the relative benefits to customers, taking account of the range of risks to customers, in relation to the benefits to RMP, should be considered as part of the Commission's review.

The magnitude of the claimed benefits to customers identified by RMP in relation to the certain benefits to the Company does not make a compelling case for UAE's endorsement of this project, particularly in light of the large capital cost required, the lack of public necessity for this project, the ad hoc deviation from the Integrated Resource Plan ("IRP") process surrounding this project, and the uncertainties that may impair the realization of projected customer benefits. Additional risks that could further affect customer benefits include deviations in the actual performance, maintenance costs, or durability of the new assets as compared to the Company's assumptions.

[1] RMP Application, p. 1.

In its supplemental filing, RMP has changed the valuation method it uses to project claimed customer benefits for the 20-year period, 2017-2036. I have three serious concerns with this change. First, it is highly problematic and troubling for RMP to change a key measurement method at this juncture of the proceeding – after three rounds of prior Company testimony[2] – particularly given that, without this change in method, the Company would not be able to show claimed net benefits for multiple scenarios. The change thus appears to be aimed at supporting the Company's desired result. Second, the changed valuation approach for PTCs is inconsistent with the valuation method that has long been used for PTCs in the Company's IRP. And third, the changed valuation approach for PTCs is inconsistent with RMP's treatment of capital costs for the repowering projects, which RMP continues to measure on a real levelized basis in its 20-year benefits analysis. By changing the method for valuing PTCs without also changing the method of valuing capital costs, the Company is effectively "cherry-picking" the combination of valuation methods that achieves the most favorable optics for the projects.

If, these concerns notwithstanding, the Commission considers approval of RMP's proposal, I offer some recommendations for better aligning risks and benefits of the proposal between RMP and its ratepayers.

First, I recommend the Commission expressly condition the Company's future cost recovery associated with the wind repowering project on the

[2] RMP filed direct testimony on June 30, 2017, rebuttal testimony on October 19, 2017, and surrebuttal testimony on November 15, 2017.

Company's ability to demonstrate that construction costs have come in at or below its estimated costs in this case, and that, measured over a reasonable period of time, the megawatt-hours produced by the repowered facilities are equal to or greater than the forecasted production provided in this proceeding. If those conditions are not satisfied, notwithstanding any determination of prudence in this proceeding, I recommend that the Commission expressly reserve the right in a future rate case to reduce the Company's recovery of costs associated with the repowering project to allow for a reasonable sharing of the risks and benefits of the project between the Company and customers.

Second, I am concerned that when measured over the 20-year period used in the Company's 2017 IRP, the benefits from this opportunity investment are significantly weighted in favor of the Company. To address this concern, if the Commission approves the wind repowering project, I recommend that it be made conditional on a reduction of 200 basis points to the authorized rate of return on common equity applicable to the un-depreciated balance of the retired plant (inclusive of associated accumulated deferred income taxes ["ADIT"]). This adjustment would have the effect of better balancing the benefits between customers and the Company. I note that although my recommended modifications would improve the terms of the proposal for customers, they will not, by themselves, overcome UAE's overall objections to this project. Therefore, they should not be viewed as an overall "cure" to the shortcomings in

the Company's proposal, but rather as an improvement to the balancing of equities should the project be approved.

Third, if the repowering project is allowed to proceed, then in addition to my other recommended actions, the overall project should clearly be scaled back to exclude at least Leaning Juniper, as this project fails to provide net benefits over a 20-year period even when measured using nominal PTCs and nominal capital costs in either the Medium Gas/Medium CO_2 or the Low Gas/Zero CO_2 scenarios. Moreover, the Commission should also consider excluding Glenrock 3, High Plains, McFadden Ridge, Dunlap Ranch, Rolling Hills, Leaning Juniper, Marengo I, Marengo II, and Goodnoe Hills from any preapproval because these projects fail to provide net benefits over a 20-year period using the measurement metrics in the IRP, i.e., real levelized PTC values, for one or both of the gas/CO_2 scenarios.

Fourth, the Resource Tracking Mechanism ("RTM") proposed by RMP to defer and recover project costs should not be approved. The proposed mechanism is quite complex. This departure from conventional ratemaking practice is not necessary and, taken as a whole, is not desirable. Because the RTM is an exercise in single-issue ratemaking, it brings with it attendant concerns about the efficacy of identifying costs and setting rates in isolation. Rather than adopting the RTM, I believe it would be preferable for RMP to instead file a general rate case at the appropriate time to recover its repowering costs in the context of the Company's overall costs and revenues.

However, if the RTM is approved, it should be modified. In particular, the Company's proposed long-term continuation of the RTM as a PTC tracking mechanism should be eliminated. PTCs are not tracked today in the manner proposed by the Company, nor is it necessary to track PTCs going forward to ensure just and reasonable rates. Therefore, I recommend that if the RTM is approved, the Company's proposal for a long-term PTC tracker be rejected. In addition, the Company's original proposal to cap the surcharge at the amount of incremental net power cost benefits should be retained, with no deferral of costs exceeding the cap, as proposed in RMP's supplemental filing.

Finally, if a form of an RTM is adopted, the treatment of property tax expense should be modified to take into account the expected reduction in property tax on existing plant that would occur as the repowering project is implemented and existing plant is retired.

II. UPDATES TO RMP'S WIND REPOWERING PROPOSAL

Q. What updates has RMP made to the repowering project in its supplemental filing?

A. The projected capital cost of the wind repowering project now stands at $1.101 billion.[3] In addition, RMP anticipates $36 million in transmission interconnection upgrade costs for a total cost of $1.137 billion.[4] All together, this represents a $17.6 million increase over RMP's rebuttal filing.[5] In total, the proposed repowering project consists of 1,123.6 MW of new nameplate capacity after

[3] Supplemental Direct Testimony of Rick T. Link, p. 4.
[4] Supplemental Direct Testimony of Timothy Hemstreet, p. 7.
[5] *Id*.

repowering 999.1 MW of existing nameplate capacity on wind sites located in Wyoming, Oregon, and Washington.[6] On average, the repowering project is now projected to increase wind energy production at the repowered sites by around 25.7%.[7]

III. ANALYSIS OF RMP'S PROPOSED CHANGES TO PROJECTED NET BENEFIT/COST CALCULATIONS

Q. How have the forecasted benefits of the project changed since the Company's direct filing?

A. The forecasted benefits of the repowering project increased significantly in RMP's rebuttal filing relative to its direct filing, but then *declined* even *more* significantly in the supplemental filing relative to the rebuttal filing. Indeed, measured on an apples-to-apples basis, the current projected net benefits for the project measured over 20 years (2017-2036) are *lower* than the benefits calculated in RMP's *direct* filing for 24 out of 27 gas-price/CO2 scenarios (as discussed further below). Measured over 34 years (2017-2050) the net benefits are now lower compared to the direct filing for most scenarios presented by the Company.

However, the decline in claimed 20-year benefits is not apparent by reviewing the tables in the Company's supplemental filing, which I have replicated below. Table KCH-1-RE[8] replicates Table 5-SD from the Supplemental Direct Testimony of Rick T. Link, reflecting claimed ratepayer

[6] Supplemental Direct Testimony of Rick T. Link, Exhibit RMP__(RTL-1SD), p. 1. After accounting for LGIA limitations, the effective capacity is 1,022.5 MW.
[7] Supplemental Direct Testimony of Rick T. Link, p. 4.
[8] Unless otherwise indicated, all measurements of benefits discussed in my testimony are on a total Company basis.

benefits ranging from $139 million to $273 million, depending upon the scenario.

Table KCH-1-RE
Net Benefits of Wind Repowering Projected by RMP ($ millions)
2017-2036, as Calculated by RMP

RMP Feb. 1, 2018 Supplemental Direct Filing

Price-Policy Scenario	SO Model PVRR(d)	PaR Stochastic-Mean PVRR(d)	PaR Risk Adjusted PVRR(d)
Low Gas, Zero CO2	($159)	($141)	($148)
Low Gas, Medium CO2	($158)	($139)	($146)
Low Gas, High CO2	($183)	($165)	($173)
Medium Gas, Zero CO2	($201)	($171)	($180)
Medium Gas, Medium CO2	($204)	($180)	($189)
Medium Gas, High CO2	($215)	($193)	($203)
High Gas, Zero CO2	($257)	($234)	($246)
High Gas, Medium CO2	($260)	($248)	($260)
High Gas, High CO2	($273)	($240)	($252)

Data Source: Supplemental Direct Testimony of Rick T. Link, Table 5-SD, p. 20.
Note: Projected customer benefits are shown as negative entries.

On the surface, the repowering benefits actually appear to increase when comparing Table 5-SD in Mr. Link's supplemental testimony, replicated above, to Table 1 in his rebuttal testimony, which I have also replicated below as Table KCH-2-RE, reflecting claimed ratepayer benefits ranging from $90 million to $214 million, depending on the scenario.

Table KCH-2-RE
Net Benefits of Wind Repowering Projected by RMP ($ millions)
2017-2036, as Calculated by RMP

RMP October 19, 2017 Rebuttal Filing

Price-Policy Scenario	SO Model PVRR(d)	PaR Stochastic-Mean PVRR(d)	PaR Risk Adjusted PVRR(d)
Low Gas, Zero CO2	($110)	($90)	($95)
Low Gas, Medium CO2	($125)	($108)	($113)
Low Gas, High CO2	($133)	($114)	($119)
Medium Gas, Zero CO2	($137)	($116)	($122)
Medium Gas, Medium CO2	($138)	($115)	($121)
Medium Gas, High CO2	($157)	($131)	($137)
High Gas, Zero CO2	($196)	($152)	($160)
High Gas, Medium CO2	($204)	($167)	($175)
High Gas, High CO2	($214)	($167)	($176)

Data Source: Rebuttal Testimony of Rick T. Link, Table 1, p. 12.
Note: Projected customer benefits are shown as negative entries.

This *appearance* of an increase only occurs because RMP made a key change in the *method* it used for measuring PTC benefits over the 20-year period, 2017-2036. As noted by Mr. Link in his Supplemental Direct Testimony, his most recent analysis reflects *nominal* federal PTC benefits, whereas the analysis in his prior rebuttal and direct testimonies used *real levelized* federal PTC benefits. As I will discuss in greater detail below, this change in measurement method is very significant: it makes the 20-year net benefits results presented in the Company's supplemental filing *non-comparable* to the 20-year net benefits results in its rebuttal or direct filings. In order to understand the directional changes in RMP's supplemental 20-year analysis relative to the Company's previous iterations, it is necessary that the supplemental analysis use the same

PTC measurement method used in RMP's direct and rebuttal filings; this conversion will allow the claimed benefit results to be compared across the different phases of the case on an apples-to-apples basis.

Q. Have you prepared such an analysis?

A. Yes. I have prepared a summary that uses the Company's original PTC measurement method to forecast the 20-year repowering benefits using all of the same assumptions the Company used in its supplemental filing. This summary is presented in Table KCH-3-RE, below, which shows impacts ranging from a negative $58 million in ratepayer detriment to a positive $77 million in claimed ratepayer benefits.

Table KCH-3-RE
Net Benefits of Wind Repowering Projected by RMP ($ millions)
2017-2036, Recalculated by UAE Using Real Levelized PTC Values

Based on RMP Supplemental Filing

Price-Policy Scenario	SO Model PVRR(d)	PaR Stochastic-Mean PVRR(d)	PaR Risk Adjusted PVRR(d)
Low Gas, Zero CO2	$38	$56	$49
Low Gas, Medium CO2	$39	$58	$51
Low Gas, High CO2	$14	$32	$24
Medium Gas, Zero CO2	($4)	$26	$16
Medium Gas, Medium CO2	($7)	$16	$8
Medium Gas, High CO2	($18)	$3	($6)
High Gas, Zero CO2	($60)	($37)	($49)
High Gas, Medium CO2	($63)	($51)	($63)
High Gas, High CO2	($77)	($43)	($55)

Data Source: UAE workpaper.
Note: Projected customer benefits are shown as negative entries.

The results in Table KCH-3-RE are comparable to RMP's original 20-year estimate of ratepayer benefits/detriments in its direct filing, which is replicated in Table KCH-4-RE, below, reflecting a range from a projected ratepayer detriment of $44 million to a projected ratepayer benefit of $103 million. Note that the projected benefits in Table KCH-3-RE are lower than the values in Table KCH-1-RE by $197 million in each scenario. That is, using the PTC valuation method originally filed by RMP (consistent with the IRP) produces projected net benefits that are $197 million lower (across the board) than the PTC valuation method used by RMP in its supplemental filing.[9]

[9] In RMP's Response to UAE 9.2(e), the Company maintains that this difference is $170 million. However, the difference in this number from the $197 million in my testimony is attributable to the fact that, in that data response, RMP has failed to fully replicate the structure of the analysis used by RMP in its

Table KCH-4-RE
Net Benefits of Wind Repowering Projected by RMP ($ millions)
2017-2036 as Calculated by RMP

RMP Direct Filing

Price-Policy Scenario	SO Model PVRR(d)	PaR Stochastic-Mean PVRR(d)	PaR Risk Adjusted PVRR(d)
Low Gas, Zero CO_2	$33	$43	$44
Low Gas, Medium CO_2	$0	$9	$8
Low Gas, High CO_2	($18)	($17)	($19)
Medium Gas, Zero CO_2	($33)	($24)	($25)
Medium Gas, Medium CO_2	($22)	($13)	($15)
Medium Gas, High CO_2	($41)	($35)	($36)
High Gas, Zero CO_2	($75)	($40)	($43)
High Gas, Medium CO_2	($64)	($34)	($37)
High Gas, High CO_2	($103)	($80)	($85)

Data Source: Direct Testimony of Rick T. Link, Table 2, p. 28.
Note: Projected customer benefits are shown as negative entries.

In comparing the above tables, it is clear that the 20-year claimed benefits of repowering have declined relative to the Company's original filing for 24 out of 27 price-policy scenarios. Also, the 20-year claimed benefits from repowering in the supplemental filing have declined compared to the Company's rebuttal filing by between $111 million and $166 million, depending on the scenario.[10]

Q. In what direction have the projected 34-year benefits moved in the supplemental filing?

A. The 34-year benefit projections have declined in the Company's supplemental filing (February 1, 2018) compared to its rebuttal filing (October 19, 2017) for all nine scenarios. The declines range between $153 million and $359 million, depending on the scenario. These declines can be seen in Mr. Link's Table 6-SD

direct filing. This disagreement is the subject of continuing discovery.
[10] This is derived by comparing Tables KCH-3-RE to Table KCH-2-RE.

on page 22 of his supplemental direct testimony. For ease of reference, I have replicated that table below in Table KCH-5-RE. Note that RMP has not changed the PTC measurement method used in the 34-year analysis relative to its direct and rebuttal filings. Consequently, unlike the 20-year analysis, the 34-year benefit projections in RMP's supplemental filing can be directly compared to the 34-year benefit projections in its direct and rebuttal filings.

Table KCH-5-RE
Net Benefits of Wind Repowering Projected by RMP ($ millions)
2017-2050 as Calculated by RMP

RMP Supplemental Filing vs. RMP Rebuttal Filing

Price-Policy Scenario	Updated Annual Revenue Requirement PVRR(d)	Rebuttal Annual Revenue Requirement PVRR(d)
Low Gas, Zero CO2	($127)	($360)
Low Gas, Medium CO2	($121)	($480)
Low Gas, High CO2	($223)	($473)
Medium Gas, Zero CO2	($224)	($483)
Medium Gas, Medium CO2	($273)	($471)
Medium Gas, High CO2	($321)	($534)
High Gas, Zero CO2	($389)	($555)
High Gas, Medium CO2	($386)	($635)
High Gas, High CO2	($466)	($619)

Data Source: Supplemental Direct Testimony of Rick T. Link, Table 6-SD, p. 22.
Note: Projected customer benefits are shown as negative entries.

The 34-year net benefits in the supplemental filing are also lower than the 34-year net benefits projected by the Company in its direct filing for seven out of nine scenarios. This can be seen by comparing the supplemental results in Table KCH-5-RE above to the results presented in the Company's direct filing, which is replicated in Table KCH-6-RE, below.

Table KCH-6-RE
Net Benefits of Wind Repowering Projected by RMP ($ millions)
2017-2050, as calculated by RMP

RMP Direct Filing

Price-Policy Scenario	PaR Stochastic-Mean PVRR(d)
Low Gas, Zero CO_2	($41)
Low Gas, Medium CO_2	($245)
Low Gas, High CO_2	($344)
Medium Gas, Zero CO_2	($362)
Medium Gas, Medium CO_2	($359)
Medium Gas, High CO_2	($401)
High Gas, Zero CO_2	($400)
High Gas, Medium CO_2	($274)
High Gas, High CO_2	($589)

Data Source: Direct Testimony of Rick T. Link, Table 3, p. 32.
Note: Projected customer benefits are shown as negative entries.

Q. What has driven the changes in forecasted repowering benefits among the various RMP filings?

A. In the Company's *rebuttal* filing, claimed net benefits increased relative to its *direct* filing due in part to a projected increase in energy output from the planned use of longer rotors. This combined change increased projected net benefits by $63.9 million in the 20-year Medium Gas/Medium CO_2 scenario. Forecasted net benefits were also increased $70.2 million in that scenario as a result of an updated Official Forward Price Curve ("OFPC"), which, despite lower gas price projections, forecasted higher wholesale power prices relative to the Company's direct case. At the same time, these increases were partially offset by a lower

load forecast, primarily caused by a projected reduction in Utah and Wyoming load, which reduced projected net benefits by $18.5 million.[11]

In RMP's *supplemental* filing, the projected increase in benefits in the rebuttal filing was largely reversed by the reduction in the corporate tax rate from 35% to 21%. Although the lower tax rate reduces the income tax expense on the return on rate base from the repowered projects, which, in isolation, improves benefits, it simultaneously reduces the tax gross up benefit from the PTCs, which is the more powerful impact. The net effect is that the tax rate cut causes the projected net benefits from repowering to be significantly reduced. As I discussed above, the forecasted benefits in the supplemental filing are now lower than the benefits forecasted in the Company's direct filing for 24 of the 27 scenarios in the 20-year analysis and for seven out of the nine scenarios in the 34-year analysis.

Q. What are the forecasted 20-year net benefits of the repowering project using the Company's original method for valuing PTCs?

A. These values are summarized in Table KCH-3-RE, above. As shown in the table, using the Company's original method for valuing PTCs, the repowering project results in net *costs* to customers over the 20-year measurement period under all low-gas-cost scenarios, ranging from net costs of $14 million to $58 million. Moreover, it also results in net costs to customers for 5 out of 9 medium-gas-cost scenarios, with net costs as high as $26 million in the Zero CO_2 scenario. Even under RMP's "middle scenario" – Medium Gas/Medium CO_2 – the repowering

[11] These impacts were discussed in my surrebuttal testimony, pp. 6-7.

project results in net costs to customers over the 20-year measurement period of $16 million using the PaR Stochastic-Mean metric when applying the Company's original method for valuing PTCs. Consequently, had RMP not changed its method for valuing PTCs, the Company would no longer have been able to claim that the repowering project produces net benefits for customers in the first 20 years of its life for this scenario.

Q. Do you believe the company's new valuation approach is appropriate?

A. No. I have three serious concerns with the change in valuation method that RMP is using in its supplemental testimony. First, it is highly problematic and troubling for RMP to change a key measurement method at this juncture of the proceeding – after three rounds of prior Company testimony – particularly when the change in method is essential for the Company to be able to continue to claim projected net benefits for the Company's desired outcome. This type of result-driven change in method should be viewed by the Commission with great skepticism. Second, the changed valuation approach for PTCs is inconsistent with the valuation method that has been used for many years for PTCs and capital costs in the context of the IRP. RMP's departure from the IRP valuation method for PTCs undermines the Company's already tenuous claim that the repowering project is a legitimate product of the IRP process. And third, the changed valuation approach for PTCs is inconsistent with RMP's treatment of capital costs for the repowering projects, which RMP continues to measure on a real levelized basis in its 20-year benefits analysis. By changing the method for valuing PTCs

without also changing the method of valuing capital costs, the Company is effectively "cherry-picking" the combination of valuation methods that achieves the most favorable optics for the projects that it wishes to pursue. I will address each of these concerns in turn.

Q. Before explaining your concerns with RMP's change in PTC valuation method, please describe the mechanics of the PTC valuation change made by the Company.

A. For at least the last 15 years, RMP has used a real levelization technique to value both the capital costs of new resources as well as PTCs for prospective wind projects in the Company's IRPs. (I will discuss the rationale for using this technique a little later in my testimony.)

As described in the Company's IRP documentation, real levelization is a method for converting a nominal stream of year-by-year revenue requirements into an alternative stream of revenue requirements that has the same present value as the nominal stream over a given measurement period. By construction, the real levelized revenue requirement has a starting value, which when escalated over the measurement period, will result in a revenue requirement projection that has the same present value as the nominal year-by-year revenue requirement over that same period. By construction, a real levelized revenue requirement starts out at its lowest value in the initial year of the analysis and then increases at the rate of inflation.

By way of comparison, in normal ratemaking, the nominal revenue requirement for a new capital investment is "front-end loaded," in that revenue requirement (or annual cost to customers) is greatest in the initial years after the new plant has come into service; over time, the effects of accumulated depreciation will reduce the rate base on which the Company earns a return on the new plant, gradually reducing the annual revenue requirement in subsequent rate cases, all other things being equal. In contrast, the shape of a real levelized revenue requirement for capital costs is the opposite of this. As I stated above, the real levelized revenue requirement starts out at its lowest point in Year 1 of the analysis and then is assumed to increase at the rate of inflation. The connection between the nominal revenue requirement and the real levelized revenue requirement is that (by construction) they both have the same present value over the measurement period, which is typically the life of an asset being evaluated.

As I stated above, PTCs are also measured on a real levelized basis in the IRP, consistent with the treatment of capital costs. Whereas the nominal revenue requirement benefit of PTCs will be experienced over the ten-year statutory life of any set of PTCs, in the IRP the real levelized value is assumed to occur throughout the expected life of the asset, and therefore has a lower starting value than the nominal value (and is assumed to grow at the rate of inflation over the asset's life consistent with the discussion above). By definition, the present value

of the PTCs is the same under both the nominal and real levelized approaches when measured over the life of the wind asset.

In evaluating the net benefits of the repowering projects in this proceeding, Mr. Link has prepared workpapers showing both nominal revenue requirements and real levelized revenue requirements for each repowering project. In his 20-year analyses, in both his direct and rebuttal testimony, Mr. Link used the real levelized value of both capital costs and PTCs in calculating project benefits, consistent with the technique used in the IRP. However, in his supplemental testimony, Mr. Link switched to measuring PTC benefits using the nominal value rather than the real levelized value, while continuing to measure capital costs on a real levelized basis.

Q. Please address your concerns about changing the PTC valuation method in the middle of the case.

A. It is highly problematic and troubling for RMP to change a key measurement method at this juncture of the proceeding – after three rounds of prior Company testimony. First, as I stated above, the change in method makes the Company's 20-year benefit analysis *non-comparable* to the 20-year benefit analyses presented by RMP in prior rounds of testimony and in its 2017 IRP. Whereas, *superficially*, the 20-year benefits to customers presented by RMP in its supplemental filing *appear* to be improving relative to the Company's prior rounds of testimony, they are, in fact, getting much worse. Thus, the change in method obscures the directional changes in benefits that have occurred. It also impairs analytical

transparency and makes it more difficult to fairly evaluate the special regulatory treatment requested by the Company. Secondly, such a mid-stream change undermines the credibility of the analysis, particularly when the change in method is essential for the calculation of net benefits to produce the Company's desired result.

Q. But couldn't the change in PTC valuation method simply be viewed as an update similar to the other updates that were made in the supplemental filing?

A. No. There is a fundamental difference between updating *inputs* into the net benefit calculation, such as gas prices or the load forecast, versus changing the *methodology* for valuing PTCs. As demonstrated in the discussion below, RMP considers real levelization to be a valuation *methodology* – and the change in methodology is what is problematic and troubling here.

Q. Please further describe RMP's use of real levelization in the IRP.

A. RMP uses real levelization in its IRP because it is a useful technique for comparing various resources that may have different service lives and different in-service dates. Since at least 2003, RMP has extolled the virtues of real levelization as a comparative measurement tool in several iterations of its IRP. For example, in 2003, the Company explained:

> The advantage of using real levelized revenue requirements is also extended to an analysis that compares various resources with various lives and various in-service dates. Real levelized revenue requirements will capture the comparative economic costs with

> respect to one set of resources being compared against another, without the need for end effects adjustments.[12]

In that same 2003 IRP, the Company indicated that real levelization was used for valuing PTCs.[13] The levelization of PTCs and their equivalent treatment to resource capital costs was explained more explicitly in the 2008 IRP:

> The current tax credit of $21/MWh, which applies to the first 10 years of commercial operation, is converted to a levelized net present value and added to the resource capital cost for entry into the System Optimizer model. The renewable PTC, or an equivalent federal financial incentive, is assumed to be available for all years in the study period.[14]

By the time of the 2013 IRP, RMP was describing real levelization as an "established and preferred" methodology:

> All capital costs evaluated in the IRP are converted to real levelized revenue requirement costs. Use of real levelized revenue requirement costs is an established and preferred methodology to account for analysis of capital investment decisions that have unequal lives and/or when it is not feasible to capture operating costs and benefits over the entire life of any given investment decision.[15]

PacifiCorp used this same language emphasizing real levelization, including the real levelization of PTCs, in the 2017 IRP.[16]

[12] PacifiCorp 2003 IRP, Appendix J, p. 355-356.
[13] Appendix L to the 2003 IRP reports wind PTC values on a real levelized basis. See Table L.1, p. 371.
[14] PacifiCorp 2008 IRP, p. 136.
[15] PacifiCorp 2013 IRP, p. 160.
[16] *See* 2017 IRP, p. 150.

Q. Why is it a problem for the method of measuring PTC benefits to be inconsistent with the method RMP used in the IRP?

A. From the outset of this case, RMP has maintained that the repowering projects were a product of the 2017 IRP process. For example, in its Application, RMP states:

> The wind repowering project increases the energy generation of the Company's existing wind facilities, while saving customers money by reducing operating costs and requalifying the facilities for PTCs. The substantial customer benefits exist across all market price and Clean Power Plan scenarios modeled in the 2017 IRP – demonstrating that the wind repowering project is not only least cost, it is also least risk. Utah Code Ann. § 54-17-402(3)(b)(iii).[17]

To maintain any reasonable nexus with the IRP process, the benefits of the repowering project should be measured using the same valuation methods that were applied in the IRP. And, consistent with this expectation, RMP did just that in its direct and rebuttal testimony in this case by using the same real levelization method for capital costs and PTCs as was used in the 2017 IRP. But now, with the reduction in corporate tax rates causing the 20-year net benefits of the repowering project to decline appreciably or disappear altogether using the IRP measurement metrics, RMP has changed its method for measuring PTC benefits. This change creates an obvious and troubling inconsistency with the measurement method used in the IRP.

The connection between the repowering project and the 2017 IRP is already very tenuous. In my previous testimony, I noted that the repowering project was not presented to IRP stakeholders until very late in the process,

[17] RMP Application, p. 9.

essentially after the analytics in the draft IRP (which did not include the repowering project) had been completed. I also noted that the specific portfolio of repowering sites proposed by the Company did not receive the benefit of the vetting through the IRP stakeholder process that might have otherwise considered whether alternative repowering portfolios would be more cost effective. These concerns were later underscored by the Commission in its acknowledgement of the Company's IRP:

> We acknowledge that the 2017 IRP substantially complies with the Guidelines. We also recognize that PacifiCorp's timing in completing and making available to parties its Energy Vision 2020 analysis deprived parties of a reasonable opportunity to evaluate that substantial element of its IRP. Accordingly, we view Energy Vision 2020, including its effects on other aspects of the plan, to be less credible for IRP purposes than the remaining IRP components.[18]

Now, by proposing a change in PTC valuation method in the supplemental filing, RMP seeks to cause the repowering proposal to depart even further from the IRP framework. This undermines the Company's already tenuous claim that the repowering project is a legitimate product of the IRP process. It is difficult to fathom that a project such as this, which is not even needed for providing reliable service, would emerge as part of the IRP preferred portfolio under the updated assumptions (in particular, lower corporate tax rates) when the project now fails to provide positive 20-year customer benefits in a majority of gas/CO_2 scenarios using the longstanding IRP measurement metrics.

[18] Docket No. 17-035-16, March 2, 2018 Report and Order at 45.

Q. Has the Commission previously addressed any attempts by RMP to selectively deviate from IRP practices in the measurement of PTC benefits?

A. Yes. In RMP's recent Qualify Facility ("QF") pricing proceeding, Docket Nos. 17-035-T07 and 17-035-37, RMP proposed to value "avoided PTCs" using nominal values rather than the real levelized values used in the IRP in an attempt to drive down avoided cost pricing for QFs. The Commission appropriately rejected that proposed change. In rejecting the Company's proposal, the Commission stated:

> No party disputes the Coalition's testimony that the capacity payment a QF receives is calculated on a real levelized basis. Furthermore, the total resource costs for supply-side resource options represent real levelized values that are inputs for PacifiCorp's IRP modeling in determining the preferred portfolio. These costs include PTC values for wind resources. At hearing, PacifiCorp testified: "[T]o the extent we want to acquire resources…we use the same models that we use in the IRP."
>
> Since the Proxy/PDDRR methodology draws upon the optimized IRP preferred portfolio, established on the basis of levelized input values, we find such values should be consistently applied in the determination of avoided cost prices. No party rebuts the Coalition's argument that if real levelization is to be used for avoided capacity cost pricing, then it should likewise be used for avoided PTC valuation, consistent with the IRP. We therefore reject PacifiCorp's proposed removal of PTCs from the calculation of real levelized avoided cost prices.[19]

The Commission's reasoning regarding the importance of using a valuation approach that is consistent with the IRP is equally applicable to the repowering proposal.

[19] Docket Nos. 17-035-T07 and 17-035-37, January 23, 2018 Order at 32-33. Footnotes omitted.

Q. Please explain the problems that occur when RMP evaluates PTCs on a nominal basis while measuring capital costs on a real levelized basis.

A. As I explained above, real levelization depicts capital-cost-related revenue requirements as being lower than they actually are in the initial years after a project comes into service. This holds true for the repowering capital costs in the Company's 20-year analysis. That is, the 20-year real levelized capital cost *understates* the true revenue requirement – and thus customer rate impacts – associated with the repowering capital cost during the first 20 years. However, I accepted RMP's treatment of capital costs in this manner in the Company's previous benefit analyses in this case because the approach used by the Company (i.e., real levelization) is used in the IRP and because PTC benefits were being treated in a consistent (i.e., real levelized) manner. Yet, if PTC benefits are to be measured on a nominal basis instead, as occurs in RMP's supplemental filing, then it would be necessary for analytical consistency to also measure 20-year *capital costs* on a nominal basis. With the change in PTC measurement method in its supplemental filing, RMP has already abandoned any credible claim to be using an IRP framework in advocating for the repowering project. If the new purpose of the 20-year analysis is simply to isolate the revenue requirement impacts of the proposal, outside of any IRP context, then the analysis should treat capital costs on a nominal basis to be consistent with the treatment of PTCs. Otherwise, changing the method for valuing PTCs without also changing the method of valuing capital costs results in a hybrid "cherry-picked" combination of

valuation methods that achieves the most favorable optics for the repowering project from RMP's advocacy perspective.

Q. Have you recalculated the 20-year benefits for the projects using nominal capital costs along with nominal PTCs?

A. Yes, I have. This analysis is summarized in Table KCH-7-RE below.

Table KCH-7-RE
Net Benefits of Wind Repowering Projected by RMP ($ millions)
2017-2036, Recalculated by UAE Using Nominal Capital Costs

Price-Policy Scenario	SO Model PVRR(d)	PaR Stochastic-Mean PVRR(d)	PaR Risk Adjusted PVRR(d)
Low Gas, Zero CO2	($121)	($103)	($109)
Low Gas, Medium CO2	($119)	($100)	($107)
Low Gas, High CO2	($145)	($127)	($135)
Medium Gas, Zero CO2	($162)	($133)	($142)
Medium Gas, Medium CO2	($165)	($142)	($150)
Medium Gas, High CO2	($177)	($155)	($164)
High Gas, Zero CO2	($218)	($195)	($207)
High Gas, Medium CO2	($221)	($209)	($221)
High Gas, High CO2	($235)	($201)	($213)

* Data Source: UAE workpaper.
Note: Projected customer benefits are shown as negative entries.

As shown by comparing Table KCH-7-RE to Table KCH-1-RE, recalculating the 20-year benefits for the projects using nominal capital costs (along with nominal PTCs) shows that the 20-year benefits are lower than what is presented in RMP's supplemental filing by approximately $39 million in each scenario. If nominal PTCs are to be used in the 20-year benefit calculation, then the adjusted values in Table KCH-7-RE should be used rather than the values calculated by RMP shown in Table KCH-1-RE.

IV. PROJECT-BY-PROJECT ANALYSIS

Q. In your rebuttal testimony, you agreed with other witnesses that projected customer benefits should be analyzed on a project-by-project basis to identify the most cost-effective package of repowering sites for customers. Has RMP performed such an analysis?

A. Yes. RMP presented a project-by-project analysis in both its rebuttal testimony and its supplemental testimony. In its rebuttal filing, RMP contended that each of the repowering sites was cost effective measured over the 2017-2050 period for the Medium Gas/Medium CO_2 scenario.[20] In the 20-year analysis, for this same scenario, each of the sites provided projected net benefits in the System Optimizer (SO) analysis, but in PaR analyses, the McFadden Ridge project produced projected net benefits near zero.[21]

In RMP's supplemental filing, the Leaning Juniper project produces projected benefits equal to costs in the 20-year analysis in the Medium Gas/Medium CO_2 scenario,[22] and results in projected net *costs* in the Low Gas/Zero CO_2 scenario,[23] with both analyses using the Company's modification to PTC valuation I discussed at length above. Both summaries are replicated in Tables KCH-8-RE and KCH-9-RE for ease of reference.

[20] Rebuttal Testimony of Rick T. Link, Table 5, p. 29.
[21] *Id.*, Table 4, p. 28.
[22] Supplemental Testimony of Rick T. Link, Table 1-SD, p. 13.
[23] *Id.*, Table 2-SD, p. 14.

Table KCH-8-RE
Net Benefits of Wind Repowering Projected by RMP ($ millions)
2017-2036, as Calculated by RMP on a Project-by-Project Basis

Medium Gas/Medium CO_2 Scenario

RMP Supplemental Filing

Wind Facility	SO Model PVRR(d)	PaR Stochastic-Mean PVRR(d)	PaR Risk-Adjusted PVRR(d)
Glenrock 1	($25)	($21)	($23)
Glenrock 3	($8)	($7)	($7)
Seven Mile Hill 1	($33)	($28)	($29)
Seven Mile Hill 2	($7)	($7)	($7)
High Plains	($17)	($13)	($13)
McFadden Ridge	($5)	($4)	($4)
Dunlap Ranch	($30)	($26)	($27)
Rolling Hills	($12)	($9)	($10)
Leaning Juniper	($0)	($0)	($0)
Marengo 1	($35)	($33)	($34)
Marengo 2	($15)	($14)	($15)
Goodnoe Hills	($18)	($18)	($19)
Total	($205)	($180)	($189)

Data Source: Supplemental Direct Testimony of Rick T. Link, Table 1-SD, p. 13.
Note: Projected customer benefits are shown as negative entries

Table KCH-9-RE
Net Benefits of Wind Repowering Projected by RMP ($ millions)
2017-2036 as Calculated by RMP on a Project-by-Project Basis

Low Gas/Zero CO_2 Scenario

RMP Supplemental Filing

Wind Facility	SO Model PVRR(d)	PaR Stochastic-Mean PVRR(d)	PaR Risk-Adjusted PVRR(d)
Glenrock 1	($21)	($21)	($22)
Glenrock 3	($7)	($6)	($6)
Seven Mile Hill 1	($28)	($28)	($29)
Seven Mile Hill 2	($6)	($6)	($6)
High Plains	($12)	($9)	($10)
McFadden Ridge	($4)	($3)	($3)
Dunlap Ranch	($25)	($22)	($24)
Rolling Hills	($9)	($7)	($7)
Leaning Juniper	$6	$3	$4
Marengo 1	($27)	($25)	($26)
Marengo 2	($11)	($10)	($11)
Goodnoe Hills	($13)	($15)	($15)
Total	($157)	($149)	($156)

Data Source: Supplemental Direct Testimony of Rick T. Link, Table 2-SD, p. 14.
Note: Projected customer benefits are shown as negative entries.

Q. How does Leaning Juniper fare in the 34-year analysis?

A. In the 34-year analysis prepared by RMP, Leaning Juniper produces a relatively small projected net benefit of $8 million in the Medium Gas/Medium CO_2 scenario and zero net benefits in the Low Gas/Zero CO_2 scenario using the PVRR(d) metric.[24] These results are replicated in Table KCH-10-RE, below.

[24] *Id.*, Table 3-SD, p. 15.

Table KCH-10-RE
Net Benefits of Wind Repowering Projected by RMP ($ millions)
2017-2050, as Calculated by RMP on a Project-by-Project Basis

RMP Supplemental Filing

Wind Facility	Medium Natural Gas and Medium CO_2	Low Natural Gas and Zero CO_2
Glenrock 1	($33)	($33)
Glenrock 3	($11)	($6)
Seven Mile Hill 1	($41)	($40)
Seven Mile Hill 2	($10)	($6)
High Plains	($22)	($6)
McFadden Ridge	($7)	($2)
Dunlap Ranch	($39)	($23)
Rolling Hills	($15)	($5)
Leaning Juniper	($8)	($0)
Marengo 1	($75)	($46)
Marengo 2	($20)	($7)
Goodnoe Hills	($26)	($19)
Total	($306)	($194)

Data Source: Supplemental Direct Testimony of Rick T. Link, Table 3-SD, p. 15.
Note: Projected customer benefits are shown as negative entries

Q. In light of these results, what does RMP recommend regarding the Leaning Juniper project?

A. RMP recommends moving ahead with the Leaning Juniper project, as well as the other eleven repowering projects.[25]

Q. Do you agree with RMP's recommendation to proceed with the Leaning Juniper project?

A. No. The Leaning Juniper project does not produce projected net benefits in the 20-year analysis in Medium Gas/Medium CO_2 scenario and results in projected net costs in the Low Gas/Zero CO_2 scenario over 20 years – even using RMP's

[25] *Id.*, pp. 16-19.

favorable measurement metric for PTC valuation. It is difficult to justify obligating customers to pay for this project in light of such meager expected results. Further, as I will discuss below, Leaning Juniper fails to provide projected net benefits over a 20-year period when measured using nominal PTCs and nominal capital costs in either the Medium Gas/Medium CO_2 or the Low Gas/Zero CO_2 scenarios. As I stated above, if nominal PTCs are to be used in the 20-year benefit calculation, then the more appropriate way to view 20-year revenue requirement impacts is to use nominal capital costs (rather than real levelized capital costs) in the analysis. As I will demonstrate below, when this is done, Leaning Juniper unambiguously fails the 20-year benefits test.

Q. How do the individual repowering projects fare when PTC benefits are measured on a real levelized basis, consistent with the IRP?

A. If PTC benefits are measured in a manner consistent with the IRP (i.e., on a real levelized basis) then several projects fail to produce 20-year projected benefits in the Medium Gas/Medium CO_2 scenario and *most* projects fail to produce projected benefits in the Low Gas/Zero CO_2 scenarios. This is shown in Tables KCH-11-RE and KCH-12-RE, below, which are summaries of 20-year projected benefits on a project-by-project basis, for the Medium Gas/Medium CO_2 and Low Gas/Zero CO_2 scenarios, respectively, recalculated using real levelized capital costs and PTC values (i.e., consistent with RMP's direct and rebuttal filings and the IRP).

Table KCH-11-RE
Net Benefits of Wind Repowering Projected by RMP ($ millions)
2017-2036, Recalculated by UAE on a Project-by-Project Basis
Using Real Levelized PTC Values

Medium Gas/Medium CO_2 Scenario

Based on RMP Supplemental Filing

Wind Facility	SO Model PVRR(d)	PaR Stochastic-Mean PVRR(d)	PaR Risk-Adjusted PVRR(d)
Glenrock 1	($5)	($2)	($4)
Glenrock 3	($1)	$0	($0)
Seven Mile Hill 1	($9)	($4)	($5)
Seven Mile Hill 2	($2)	($2)	($2)
High Plains	$6	$10	$10
McFadden Ridge	$2	$3	$3
Dunlap Ranch	($1)	$3	$2
Rolling Hills	$3	$5	$4
Leaning Juniper	$14	$15	$15
Marengo 1	($10)	($7)	($8)
Marengo 2	($3)	($2)	($3)
Goodnoe Hills	($3)	($2)	($3)
Total	($9)	$17	$8

Data Source: UAE workpaper.
Note: Projected customer benefits are shown as negative entries.

Table KCH-12-RE
Net Benefits of Wind Repowering Projected by RMP ($ millions)
2017-2036, Recalculated by UAE on a Project-by-Project Basis
Using Real Levelized PTC Values

Low Gas/Zero CO_2 Scenario

Based on RMP Supplemental Filing

Wind Facility	SO Model PVRR(d)	PaR Stochastic-Mean PVRR(d)	PaR Risk-Adjusted PVRR(d)
Glenrock 1	($1)	($1)	($3)
Glenrock 3	$0	$1	$1
Seven Mile Hill 1	($4)	($4)	($5)
Seven Mile Hill 2	($1)	($1)	($1)
High Plains	$10	$13	$12
McFadden Ridge	$3	$4	$4
Dunlap Ranch	$4	$6	$4
Rolling Hills	$6	$8	$8
Leaning Juniper	$20	$18	$19
Marengo 1	($2)	$1	$0
Marengo 2	$1	$2	$1
Goodnoe Hills	$3	$1	$1
Total	$39	$48	$41

Data Source: UAE workpaper.
Note: Projected customer benefits are shown as negative entries.

As shown in Table KCH-11-RE, High Plains, McFadden Ridge, Dunlap Ranch, Rolling Hills, and Leaning Juniper generally result in net projected detriments or costs to customers in the 20-year measurement period, for the Medium Gas/Medium CO_2 scenario, using the PTC valuation method employed in the IRP (as well as in RMP's direct and rebuttal filings). In addition, as shown in Table KCH-12-RE, most of the individual repowering projects fail the 20-year benefits test using real levelized PTCs in the Low Gas/Zero CO_2 scenario. Specifically, Glenrock 3, High Plains, McFadden Ridge, Dunlap Ranch, Rolling

Hills, Leaning Juniper, Marengo I, Marengo II, and Goodnoe Hills each generally result in net costs to customers under this scenario using the PTC valuation method employed in the IRP.

Q. What conclusions do you draw from this analysis?

A. It is important for the Commission to recognize that many of the individual repowering projects would fail to provide 20-year projected benefits to customers if PTC benefits are measured using the same method employed in the IRP and in the Company's direct and rebuttal filings. Although RMP has now "repackaged" the PTC benefit stream in a way that improves the optics of the 20-year analysis, this repackaging requires a departure from the IRP valuation method for PTCs that has been in place for at least the past 15 years. The failure of so many individual projects to provide net benefits over the 20-year measurement period using the original PTC valuation method should give the Commission significant pause.

Q. You said that you also prepared a 20-year project-by-project analysis using nominal PTCs and nominal capital costs. Please describe the results of this analysis.

A. A summary of this analysis is shown in Tables KCH-13-RE and KCH-14-RE, below, which are summaries of 20-year benefits on a project-by-project basis, for the Medium Gas/Medium CO_2 and Low Gas/Zero CO_2 scenarios, respectively, recalculated using nominal PTCs and nominal capital costs.

As I noted above, the Leaning Juniper project results in net projected costs to customers under both the Medium Gas/Medium CO_2 and Low Gas/Zero CO_2 scenarios. In addition, the benefits projected for McFadden Ridge are relatively small in both scenarios ($1 million to $3 million).

Table KCH-13-RE
Net Benefits of Wind Repowering Projected by RMP ($ millions)
2017-2036, Recalculated by UAE on a Project-by-Project Basis
Using Nominal PTC Values and Nominal Capital Costs

Medium Gas/Medium CO_2 Scenario
Based on RMP Supplemental Filing

Wind Facility	SO Model PVRR(d)	PaR Stochastic-Mean PVRR(d)	PaR Risk-Adjusted PVRR(d)
Glenrock 1	($22)	($18)	($20)
Glenrock 3	($7)	($6)	($6)
Seven Mile Hill 1	($28)	($24)	($25)
Seven Mile Hill 2	($6)	($6)	($6)
High Plains	($12)	($8)	($8)
McFadden Ridge	($3)	($2)	($2)
Dunlap Ranch	($24)	($20)	($21)
Rolling Hills	($9)	($7)	($8)
Leaning Juniper	$1	$2	$2
Marengo 1	($31)	($28)	($29)
Marengo 2	($13)	($11)	($12)
Goodnoe Hills	($15)	($14)	($15)
Total	($169)	($142)	($151)

Data Source: UAE workpaper.
Note: Projected customer benefits are shown as negative entries.

Table KCH-14-RE
Net Benefits of Wind Repowering Projected by RMP ($ millions)
2017-2036, Recalculated by UAE on a Project-by-Project Basis
Using Nominal PTC Values and Nominal Capital Costs

Low Gas/Zero CO_2 Scenario

Based on RMP Supplemental Filing

Wind Facility	SO Model PVRR(d)	PaR Stochastic-Mean PVRR(d)	PaR Risk-Adjusted PVRR(d)
Glenrock 1	($18)	($18)	($19)
Glenrock 3	($6)	($5)	($5)
Seven Mile Hill 1	($24)	($23)	($25)
Seven Mile Hill 2	($5)	($5)	($5)
High Plains	($7)	($4)	($5)
McFadden Ridge	($2)	($1)	($1)
Dunlap Ranch	($19)	($16)	($18)
Rolling Hills	($6)	($4)	($4)
Leaning Juniper	$7	$5	$6
Marengo 1	($23)	($20)	($21)
Marengo 2	($8)	($7)	($8)
Goodnoe Hills	($9)	($11)	($11)
Total	($120)	($109)	($117)

Data Source: UAE workpaper.
Note: Projected customer benefits are shown as negative entries.

Q. What are your recommendations to the Commission regarding the project-by-project analysis?

A. If, notwithstanding my recommendation that the repowering project be rejected in total, if any portion of it is allowed to proceed, then, in addition to my other recommended actions, I recommend that the overall project be scaled back to exclude Leaning Juniper, as this project fails to provide projected net benefits over a 20-year period measured using nominal PTCs and nominal capital costs in either the Medium Gas/Medium CO_2 or the Low Gas/Zero CO_2 scenarios.

Moreover, the Commission should also consider excluding Glenrock 3, High Plains, McFadden Ridge, Dunlap Ranch, Rolling Hills, Leaning Juniper, Marengo I, Marengo II, and Goodnoe Hills from any preapproval because these projects fail to provide net benefits over a 20-year period using the measurement metrics in the IRP, i.e., real levelized PTC values, for one or both of the gas/CO_2 scenarios.

V. OTHER RECOMMENDATIONS

Q. In your direct testimony you recommended against adoption of the Company's repowering proposal. Is that still your position?

A. Yes. In my direct testimony I stated that the magnitude of the customer benefits from the repowering project in relation to the benefits to the Company over the next 20 years did not make a compelling case for UAE's endorsement of this project. Since I made that statement, tax reform has been enacted and the economics of this project have only gotten worse for customers (notwithstanding the fact that RMP is *depicting* the economics more favorably).

As I stated in my direct testimony, RMP's wind repowering proposal is not a typical utility investment proposition. Utility generation projects are typically driven by the need to meet reliability requirements, load growth, and/or to replace retired plant that has come to the end of its useful life. That is not the case here. I have described the wind repowering project as an "opportunity" investment that seeks to take advantage of the availability of PTCs before federal tax credits begin to phase out.

If approval of the repowering project is based on public necessity, then clearly it should be rejected because the project is simply not needed to meet utility service requirements. Not even RMP, the chief advocate for the project, has ventured to make the claim that the project is needed to serve customer load requirements. Indeed, in some respects, the project is the antithesis of need, in that its core activity involves taking an action that, but for an expiring tax policy, would not make economic sense in the first place: namely, prematurely replacing 10-year-old wind generating equipment that has 20 years remaining on its useful life.

If public necessity cannot reasonably be the basis for approval of this project, then what should be considered – if it is to be considered beyond that threshold? In my direct testimony, I addressed that question by recommending that the relative benefits to customers, taking account of the range of risks to customers, in relation to the benefits to RMP, should be considered as part of the Commission's review. My conclusion at this juncture of the proceeding is that the overall equities are not sufficiently balanced or reasonable to support approval – particularly in light of the large capital cost required, the lack of public necessity for this project, the ad hoc deviation from the IRP process surrounding this project, and the uncertainties that may impair the realization of projected customer benefits.

Q. How do the relative equities stack up after RMP's supplemental filing?

A. One of the challenges in answering this question is that the framework for measuring projected 20-year benefits has changed with the Company's supplemental filing, as I discussed above. In my opinion, RMP's new "hybrid" measurement – nominal PTCs paired with real levelized capital costs – is not a valid framework. Twenty-year benefits should either be measured using the original IRP framework, or, if the IRP treatment of PTCs is to be abandoned, through a consistent pairing of nominal PTCs and nominal capital costs.

The 20-year projection of customer benefits (and costs) using the original analytical framework in this case (real levelized PTCs and real levelized capital costs) was presented in Table KCH-3-RE, earlier in my testimony. The estimate of customer benefits over this period ranges from a net *cost* to customers of $58 million to a net benefit of $77 million. The middle case, the Medium Gas, Medium CO_2 scenario, yields a range of net *costs* of $16 million to net benefits of $7 million.

Yet, over this same period, the net present value of the projected return to the Company on the repowering investment is $320 million, measured on a real levelized basis (the same basis used by RMP to measure capital costs over this period). If, conservatively, we only consider the after-tax equity return over this period, the benefit to the Company is projected to be $212 million. This calculation is shown in UAE Exhibit No. 1.1RE.[26] Thus, over the 20-year

[26] See Line Nos. 32-34 of the "20 Year NPV" column on page 1 of UAE Exhibit No. 1.1RE.

measurement period, the benefits from this opportunity investment are significantly weighted in favor of the Company.

Alternatively, if we measure 20-year projected customer benefits and Company returns entirely on a nominal basis (e.g., nominal PTCs and nominal capital costs) the estimate of customer benefits over this period ranges from a projected net benefit of $100 million to $235 million, as shown in Table KCH-7-RE. The middle case, the Medium Gas, Medium CO_2 scenario, yields a range of projected net benefits of $150 million to $165 million.

Meanwhile, the 20-year benefit to the Company is projected to be $247 million.[27] This benefit (or equity return to the Company) is greater than the benefit measured using the IRP metric, because the former is calculated using the real levelized capital costs rather than the nominal capital costs. Yet, even though abandoning the IRP framework for measuring 20-year projected customer benefits results in more favorable-looking results for customers, the projected benefits from the repowering investment remain significantly weighted in favor of the Company.

Q. What are the relative equities between the parties over the longer measurement period?

A. For the longer measurement period, 2017-2050, RMP calculates projected benefits to customers ranging from $121 million to $466 million, with a net customer benefit of $273 million in the Medium Gas, Medium CO_2 scenario. These projections are shown in Table KCH-5-RE, presented earlier in my

[27] See Line Nos. 15-17 in "20 Year NPV" column in the top section of page 1 in UAE Exhibit No. 1.1RE.

testimony. Over this same period, the net present value of the projected return to the Company on the repowering investment is $418 million. If, conservatively, we only consider the after-tax equity return over this period, the benefit to the Company is projected to be $277 million. This calculation is also shown in UAE No. 1.1-RE.[28]

Q. Why do the benefits to customers appear over a range, whereas the benefits to the company are expressed as a single value?

A. The benefits to customers appear as a range because the repowering proposal is structured such that the fuel price and CO_2 risk is borne entirely by customers. In addition, there are other risks to customers that are not captured in the Company's analysis, such as deviations in the performance, maintenance costs, or durability of the new assets. In contrast, if the project is approved as proposed by RMP, then the Company would be expected to earn its return on investment, subject to the normal variations that may occur in between rate cases. In terms of expected benefits, the repowering proposal is a much more stable proposition for the Company than it is for customers.

Q. In your previous testimony you made several recommendations in the event that the Commission considers approval of RMP's proposal. Please summarize those recommendations.

A. If the Commission considers approval of this project notwithstanding my recommendation to the contrary, I previously recommended that the Commission expressly condition the Company's future cost recovery associated with the wind

[28] See Line Nos. 15-17 or 32-34 of the "Lifecycle NPV" column on page 1 of UAE Exhibit No. 1.1RE.

repowering project on the Company's ability to demonstrate that construction costs have come in at or below its estimated costs in this case, that the projects were completed as scheduled, and that, measured over a reasonable period of time, the megawatt-hours produced by the repowered facilities are equal to or greater than the forecasted production provided in this proceeding.

In RMP's rebuttal filing, the Company provided evidence that it has taken steps to ensure completion of the projects within the necessary schedule to qualify for the PTCs under the current statutes and to provide financial remedies if the schedule is not met. Consequently, in my surrebuttal testimony, I modified my recommendation to remove the condition that projects are completed as scheduled. However, since this project is being justified by the Company solely on the grounds of potential customer benefits, I continue to believe it is important that there be a reasonable nexus between future cost recovery and the actual provision of net benefits. For that reason, I continue to recommend that the future cost recovery associated with the wind repowering project be conditioned on the Company's ability to demonstrate that construction costs have come in at or below its estimated costs in this case, and that, measured over a reasonable period of time, the megawatt-hours produced by the repowered facilities are equal to or greater than the forecasted production provided in this proceeding. I note that in the case of the latter, I am recommending that the output of the facilities be measured over a reasonable period of time in order to capture the long-term output trends to avoid penalizing the Company for adverse short-term results. If

those conditions are not satisfied, notwithstanding any determination in this proceeding, I recommend that the Commission expressly reserve the right in a future rate case to reduce the Company's recovery of costs associated with the repowering project to allow for a reasonable sharing of the risks and benefits of the project between the Company and customers.

Q. In your previous testimony you also recommended a reduction of 200 basis points to the authorized rate of return on common equity applied to the un-depreciated balance of the plant that RMP would retire to install the repowering investment. Is this still your recommendation?

A. Yes, it is. To ensure that the Company and customers are reasonably sharing the risks and benefits of the proposed project even if the project comes in on budget, on time, and produces the anticipated generation output, I continue to recommend that a reasonable adjustment be made to the allowed return on the retired plant. As I discussed in my direct testimony, RMP plans to retire the replaced assets, but still recover the cost of these assets while earning the Company's authorized rate of return on the un-depreciated balance. RMP has made it clear that recovering the cost (and earning a return) on the retired assets is an integral part of its proposal.[29]

Since the retired plant would no longer be used and useful, there is a greater degree of discretion that can be applied to the allowed return on it compared to the allowed return on plant in service. This can range all the way from no return on the retired plant to a full return, depending on the merits of the

[29] Direct Testimony of Jeffrey K. Larsen, p. 17.

situation. The adjustment I am recommending is intended to better balance, upfront, the potential benefits from this proposition for both customers and the Company.

Q. Have you updated the impact of your 200 basis point adjustment?

A. Yes. The impact differs based on the benefit measurement parameters. The impacts using real levelized values consistent with the IRP valuation method are summarized in Table KCH-15-RE, below. That table shows that a reduction of 200 basis points to the authorized rate of return on common equity applied to the un-depreciated balance of the retired plant (taking into account associated ADIT) would increase the benefits to customers in the 20-year measurement period, 2017-2036, by $34 million, while reducing the projected benefits to the Company by $25 million. These calculations are shown in UAE Exhibit No. 1.2RE.[30] The reason for the difference between these two values is that customer benefits are measured on a pre-tax basis (*i.e.*, the measurement takes into account income tax expense paid by customers) whereas Company benefits are measured on an after-tax basis. If this 200 basis point adjustment to the return on common equity is made, the resulting 20-year benefit for the Company would be reduced to $187 million,[31] while the projected benefits to customers would range from a cost of $24 million to a net benefit of $110 million,[32] using the same assumptions incorporated in the summary in Table KCH-3-RE.

[30] See UAE Exhibit No. 1.2RE, p. 1, column b, lines 14-15.

[31] Derivation: $212.414 million - $25.472 million ≈ $186.941 million.

[32] This is derived by adding $34 million in customer benefits to the projected range of $58 million in net costs to $77 million in net benefits shown in Table KCH-3-RE.

Over the 2017-2050 period, a reduction of 200 basis points to the return on common equity on the retired plant would increase the projected benefits to customers by $45 million, while reducing the benefits to the Company by $34 million. These calculations are also shown in UAE Exhibit No. 1.2RE.[33] The resulting benefit from the project for the Company would be reduced to $244 million,[34] while the projected benefits to customers would range from $166 million to $511 million,[35] using the same assumptions embedded in the summary in Table KCH-5-RE.

[33] See UAE Exhibit No. 1.2RE, p. 1, column d, lines 11-12 or 14-15.

[34] Derivation: $277.436 million - $33.650 million = $243.787 million.

[35] This is derived by adding $45 million in customer benefits to the RMP projected range of $121 million to $466 million in net benefits shown in Table KCH-5-RE.

Table KCH-15-RE
Summary of Benefits After 200 BP Adjustment to ROE on Retired Plant
Total Company

Projected Net Benefits to Customers and RMP Based on IRP Method (Real Levelized PTCs and Capital Costs)			
Timeframe	**Customer Benefit Range (Millions)**		**RMP Benefit (Millions)**
2017-2036	$58	($77)	$212
2017-2050	($121)	($466)	$277

Projected Net Benefits to Customers and RMP Based on 200 BP Adjustment to ROE on Retired Plant			
Timeframe	**Customer Benefit Range (Millions)**		**RMP Benefit (Millions)**
2017-2036	$24	($110)	$187
2017-2050	($166)	($511)	$244

Note: Projected customer benefits are shown as negative entries. RMP benefits are shown as positive entries.

Q. Your comparison of net benefits to customers and the Company is on a total Company basis. Have you prepared any calculations on a Utah-allocated basis?

A. Yes. I convert the benefit measurements shown in Table KCH-15-RE into a Utah-allocated basis in Table KCH-16-RE, below.

Table KCH-16-RE
Summary of Benefits After 200 BP Adjustment to ROE on Retired Plant
Utah Allocated

Projected Net Benefits to Customers and RMP Based on IRP Method (Real Levelized PTCs and Capital Costs)			
Timeframe	**Customer Benefit Range (Millions)**		**RMP Benefit (Millions)**
2017-2036	$25	($33)	$93
2017-2050	($53)	($204)	$121

Projected Net Benefits to Customers and RMP Based on 200 BP Adjustment to ROE on Retired Plant			
Timeframe	**Customer Benefit Range (Millions)**		**RMP Benefit (Millions)**
2017-2036	$11	($48)	$82
2017-2050	($73)	($223)	$106

Note: Projected customer benefits are shown as negative entries. RMP benefits are shown as positive entries.

Q. What is the impact of your 200 basis point adjustment using nominal PTCs and nominal capital costs to measure benefits?

A. The impact is summarized in Table KCH-17-RE, below. That table shows that a reduction of 200 basis points to the authorized rate of return on common equity applied to the un-depreciated balance of the retired plant (taking into account associated ADIT) would increase the projected benefits to customers in the 20-year measurement period, 2017-2036, by $41 million, while reducing the benefits to the Company by $31 million. These calculations are also shown in UAE Exhibit No. 1.2RE.[36] If this 200 basis point adjustment to the return on common

[36] See UAE Exhibit No. 1.2RE, p. 1, column b, lines 11-12.

equity is made, the resulting 20-year benefit for the Company would be reduced to $216 million,[37] while the projected benefits to customers would range from $141 million to $276 million,[38] using the same assumptions incorporated in the summary in Table KCH-7-RE.

I note that the impacts for the 2017-2050 timeframe are the same as shown in Table KCH-15-RE, because the 2017-2050 analysis is not affected by the change in measurement methodology.

[37] Derivation: $246.718 million - $30.995 million = $215.723 million.

[38] This is derived by adding $41 million in customer benefits to the projected range of $100 million to $235 million in net benefits shown in Table KCH-7-RE.

Table KCH-17-RE
Summary of Benefits After 200 BP Adjustment to ROE on Retired Plant
Total Company

Projected Net Benefits to Customers and RMP Measured Using Nominal PTCs and Nominal Capital Costs			
Timeframe	**Customer Benefit Range (Millions)**		**RMP Benefit (Millions)**
2017-2036	($100)	($235)	$247
2017-2050	($121)	($466)	$277

Projected Net Benefits to Customers and RMP Based on 200 BP Adjustment to ROE on Retired Plant			
Timeframe	**Customer Benefit Range (Millions)**		**RMP Benefit (Millions)**
2017-2036	($141)	($276)	$216
2017-2050	($166)	($511)	$244

Note: Projected customer benefits are shown as negative entries. RMP benefits are shown as positive entries.

Q. If the project moves forward, why are the impacts from your recommended 200 basis point adjustment reasonable?

A. In the 20-year measurement, absent this adjustment, the benefit to RMP exceeds even the upper-end projected benefit to customers under the High Gas/High CO_2 scenario. This is simply not a reasonable packaging of risk and reward. Further, for the purpose of evaluating the repowering proposal from a customer perspective, it is wise to be conservative. Therefore, the "high end" outcomes (e.g., High Gas/High CO_2) should not be given much, if any, weight in the context of this "opportunity" investment. The projected benefits under the Medium Gas/Medium CO_2 scenario are in the $150 million to $165 million range, and

under the Low Gas/Medium CO2 scenario, the projected benefits are in the range of $100 million to $119 million. I believe that a 200 basis point adjustment produces a more reasonable balancing of projected benefits between customers and the Company.

Q. Have you converted the Total Company values in Table KCH-17-RE into Utah-allocated values?

A. Yes. The values in Table KCH-17-RE are converted into Utah-allocated values in Table KCH-18-RE, below.

Table KCH-18-RE
Summary of Benefits After 200 BP Adjustment to ROE on Retired Plant
Utah Allocated

Projected Net Benefits to Customers and RMP Measured Using Nominal PTCs and Nominal Capital Costs			
Timeframe	**Customer Benefit Range (Millions)**		**RMP Benefit (Millions)**
2017-2036	($44)	($102)	$108
2017-2050	($53)	($204)	$121

Projected Net Benefits to Customers and RMP Based on 200 BP Adjustment to ROE on Retired Plant			
Timeframe	**Customer Benefit Range (Millions)**		**RMP Benefit (Millions)**
2017-2036	($62)	($120)	$94
2017-2050	($73)	($223)	$106

Note: Projected customer benefits are shown as negative entries. RMP benefits are shown as positive entries.

VI. SUMMARY OF RECOMMENDATIONS

Q. Please summarize your recommendation to the Commission regarding RMP's request for approval of the wind repowering project.

A. I recommend against approval of the repowering project. The magnitude of projected benefits to customers does not make a compelling case for UAE's endorsement of this project in light of the large capital cost required, the lack of public necessity for this project, the ad hoc deviation from the IRP process surrounding this project, and the uncertainties that may impair the realization of projected customer benefits.

If the repowering project is nevertheless approved, I recommend the Commission expressly condition the Company's future cost recovery associated with the wind repowering project on the Company's ability to demonstrate that construction costs have come in at or below those estimated, and that, measured over a reasonable period of time, the megawatt-hours produced by the repowered facilities are equal to or greater than the forecasted production provided in this proceeding. I further recommend that any approval be made conditional on a reduction of 200 basis points to the authorized rate of return on common equity applied to the un-depreciated balance of the retired plant (inclusive of associated ADIT). Since the Company's cost of capital will change over time, the allowed return on the unamortized balance of the retired plant should be reset as a part of subsequent general rate cases by maintaining this differential relative to the return on equity approved in those cases. Further, because the retired assets would be

subject to a lower rate of return under my proposal, it may be more appropriate to convert them to a regulatory asset, to better track them over time, rather than simply rebooking them into the Accumulated Depreciation Reserve ("ADR") as proposed by RMP.

I further recommend that if the repowering project is allowed to proceed, then in addition to my other recommended actions, the overall project should be scaled back to exclude at least Leaning Juniper, as this project fails to provide net benefits over a 20-year period even when measured using nominal PTCs and nominal capital costs in either the Medium Gas/Medium CO_2 or the Low Gas/Zero CO_2 scenarios. Moreover, the Commission should also consider excluding Glenrock 3, High Plains, McFadden Ridge, Dunlap Ranch, Rolling Hills, Leaning Juniper, Marengo I, Marengo II, and Goodnoe Hills from any preapproval because these projects fail to provide net benefits over a 20-year period using the measurement metrics in the IRP, i.e., real levelized PTC values, for one or both of the gas/CO_2 scenarios.

VII. RESOURCE TRACKING MECHANISM

Q. Please briefly describe the resource tracking mechanism that RMP is proposing.

A. As I discussed in my previous testimony, the Company is proposing a new deferral and cost recovery mechanism, called the Resource Tracking Mechanism or RTM. The Company is asking for the RTM to be in place until the incremental

costs and benefits of the repowering project are fully reflected in base rates.[39] Once the full costs are reflected in base rates in a general rate case, RMP proposes that the RTM stay in place for the purpose of tracking year-to-year changes in the PTCs from the repowered facilities. RMP proposes that the deferral for each of the repowered wind resources include the following revenue requirement components:

- A return on capital investment, net of ADR and ADIT
- Operations & Maintenance ("O&M") Expense
- Depreciation expense
- Property taxes
- Wyoming Wind Tax
- Net Power Cost ("NPC") impacts
- PTCs

RMP proposes to calculate the RTM deferral as the difference between the value included in base rates for these items and the new value, taking into account the costs and benefits of repowered wind facilities as they come into service.

Q. How would NPC savings attributable to incremental wind production be captured in rates?

A. NPC savings are captured in the Energy Balancing Account ("EBA"), through which the benefit from incremental NPC savings would be flowed though to customers. To the extent the EBA is modified or eliminated, the Company proposes to use the RTM to pass back any incremental NPC savings not captured in the EBA.[40]

[39] RMP Application, pp. 7-8.
[40] Direct Testimony of Jeffrey K. Larsen, p. 5.

Q. Did the Company update its RTM calculation in its supplemental filing?

A. Yes. According to the Supplemental Direct Testimony of Joelle R. Steward, the Company updated the expected costs and benefits proposed to be recovered through the RTM to reflect Mr. Link's updated economic analysis and the effects of federal tax reform.[41] Unlike the Company's direct filing, which showed a net revenue requirement decrease as a result of the wind repowering project in 2019, 2021, and 2022,[42] and the Company's rebuttal analysis, which showed a revenue requirement decrease in each year from 2019-2022,[43] the supplemental filing now shows a revenue requirement increase in 2019-2021.[44] Net customer benefits are not projected to materialize until 2022. These changes demonstrate the potential impact of material risks in this case, as I noted in my previous testimony.

Q. In what ways do the results of RMP's supplemental RTM analysis differ from its direct filing?

A. Compared to RMP's direct filing, the wind repowering project rate base is higher in the supplemental filing, largely due to a lower ADIT balance as a result of the lower corporate tax rate. However, the pre-tax return on rate base is lower in each year 2020 through 2022 due to the lower tax-gross up. O&M expense increased in the supplemental filing compared to the direct filing, and there were modest changes in depreciation expense, property taxes, and wind taxes. For the years

[41] Supplemental Direct Testimony of Joelle R. Steward, p. 2.

[42] See Exhibit RMP___(JKL-2). In RMP's direct filing, a revenue requirement increase of $2.735 million (UT) was projected in 2020 due to the repowering project. However, $0 customer benefit or cost was projected in 2020, due to the cap which limited customer cost responsibility to the EBA pass-through amount.

[43] See Exhibit RMP___(JKL-2R).

[44] Supplemental Direct Testimony of Joelle R. Steward, p. 2.

2019 through 2021, there were modest changes to incremental NPC savings, with a larger decrease in projected NPC savings in 2022 compared to the direct filing, of $4.195 million on a Total Company basis ($1.788 million Utah).[45] The gross-up of the PTC benefit for taxes was significantly impacted by the lower tax rate, resulting in a decreased PTC revenue requirement benefit compared to the direct filing in each year 2019 through 2022, despite the fact that the amount of the PTC benefit before the gross-up is actually higher in the supplemental filing.

In total, the Company is now projecting a net increase in Utah-allocated costs of $952 thousand in 2019, $9.132 million in 2020, and $3.664 million in 2021, with a benefit of $978 thousand occurring in 2022 as a result of the wind repowering project.

Q. What is your assessment of the RTM proposed by the Company?

A. In my direct and rebuttal testimony, I explained that the RTM would add complexity to the ratemaking process, and expressed that I was unconvinced that such a mechanism should be adopted in lieu of RMP simply filing a general rate case at the appropriate time. I continue to believe that conventional ratemaking is preferable to the adoption of a single-issue tracking mechanism, and would provide a reasonable path forward for cost recovery if RMP proceeds with the repowering project. Utilities routinely make significant investments in the normal course of business without seeking or obtaining special ratemaking treatment. Instead, utilities must evaluate whether the current level of rates is compensatory

[45] Like RMP's direct filing, the NPC impacts used in the supplemental RTM calculations are based on the Medium Gas, Medium CO_2 scenario.

in light of their *overall* costs and revenues.

Conventional ratemaking is not intended to be a "cost reimbursement" exercise. Rather, it is an exercise in price setting, with the expectation that the utility management will be incentivized to operate efficiently within the established pricing framework. The "fixed price" paradigm of conventional ratemaking in effect "stands in" for the pressures of competition that a non-monopoly firm would otherwise face. In between rate cases, with adept management, the utility is able to earn above its authorized return; conversely, the utility must also bear the risk of under-earning its authorized return. The importance of maintaining these incentives in utility regulation was expressed by Alfred E. Kahn in his seminal work, *The Economics of Regulation: Principles and Institutions*:

> Indeed, if effectiveness were defined, as it obviously ought to be, with an eye to the institutional requirements for efficiency and innovation, public utility commissions ought not even to *try* continuously and instantaneously to adjust rate levels in such a way as to hold companies continually to some fixed rate of return; and they probably ought not to try either to hold the rate of return down to the bare cost of capital. The *regulatory lag*—the inevitable delay that regulation imposes in the downward adjustment of rate levels that produce excessive rates of return and in the upward adjustments ordinarily called for if profits are too low—is thus to be regarded not as a deplorable imperfection of regulation but as a positive advantage. Freezing rates for the period of the lag imposes penalties for inefficiency, excessive conservatism, and wrong guesses, and offers rewards for their opposites: companies can for a time keep the higher profits they reap from a superior performance and to suffer the losses from a poor one. A similar function is served by the Commission's following the explicit policy of holding permitted profits not to a fixed percentage, but within a range or "zone of reasonableness,"

> with adjustments in rates permitted or imposed only when returns fall outside that range.[46]

The adoption of a single-issue tracker mechanism like the RTM erodes the economic incentive of a utility to manage its costs and operate as efficiently as possible, and undermines the balanced operation of conventional ratemaking as described by Dr. Kahn.

I recommend against approval of the RTM because it is an example of single-issue ratemaking and, as such, suffers from the shortcomings of identifying costs and setting rates in isolation. Further, when all net costs are flowed through such a mechanism, it potentially undermines the incentive for a utility to perform as efficiently as it might otherwise do. The Company's supplemental filing provides no new evidence or policy argument that suggests to me that the RTM is necessary or desirable.

Q. In light of the concerns you have identified with respect to single-issue ratemaking and reduced incentive to manage costs, what factors should the Commission consider when asked to approve a single-issue tracking mechanism such as the RTM?

A. I recommend that the Commission consider at least the following three basic questions before adopting a single-issue tracking mechanism:

1. Are the costs that would be recovered through the mechanism subject to significant volatility from year to year?

2. Are the costs in question largely beyond the control of management?

[46] Alfred E. Kahn, *The Economics of Regulation: Principles and Institutions* (New York: John Wiley & Sons, 1970) Vol. II, p. 48. Footnote omitted.

3. Are the costs that could be recovered through the mechanism substantial enough to have a material impact on the utility's revenue requirement and financial health between rate cases if they were to go unrecovered?

A single-issue tracking mechanism should be evaluated in the context of these three questions. Even if the answer to each question is "yes," the adoption of such a mechanism should be weighed against the disadvantages of single-issue ratemaking and disincentives to manage costs.

Q. If development of the wind repowering project goes forward, what are the implications for the issues identified in these three questions?

A. The repowering project costs do not appear to be subject to significant volatility. According to the Supplemental Direct Testimony of Cindy A. Crane, the expected investment costs of the repowering project are now less uncertain, as the contract negotiations and technical studies are nearing completion.[47] Neither these expenditures nor the going-forward operations costs are beyond the control of management. While the PTC benefit is largely dependent on wind conditions, it is also dependent on the locations of the repowered wind turbines, and partially dependent as well on the Company's operation and maintenance practices and the corresponding generator availability. Thus, while the PTC benefit is variable and not entirely controlled by the Company, the Utah ratemaking treatment of PTCs is to include them in base rates at test period levels, *i.e.*, PTC variability does not warrant special ratemaking treatment today. There is nothing unique about the proposed repowering project that justifies changing this policy by adopting the

[47] Supplemental Direct Testimony of Cindy A. Crane, p. 1.

RTM on the basis of concerns about PTC variability or lack of management control over the PTCs for the repowered plants.

Moreover, the continued applicability of PTCs to the existing wind plants would be a direct result of moving ahead with the proposed repowering project, and thus would derive from a conscious choice by Company management to re-qualify the Company's existing wind resources for PTCs. Accordingly, it is reasonable for any incremental PTC variability risk, due to requalification of these investments, to be borne by RMP as project proponent and investor.

Finally RMP's Utah earnings are currently reasonably healthy, and give no indication that special ratemaking treatment is needed for the Company to carry out its investment activities. For example, the Company's most recent available Results of Operations for the period ending June 2017 indicates that the Company's normalized return on equity in Utah was 9.632%, and its overall return on rate base was 7.498%. This overall rate of return is comparable to the rate of return of 7.57% authorized by the Commission in Docket No. 13-034-184.

Q. In its direct testimony, RMP proposed to cap the RTM until the next general rate case so that, after taking into account the NPC benefits that will flow through the EBA, it would not result in a net charge to customers. Has the Company modified its proposal in light of the projected increase in net costs?

A. Yes. In its direct filing, the Company proposed that customers would be subject to a surcharge if the wind repowering project results in a net cost to RMP in a measurement year. However, the surcharge would be capped at the amount of the

incremental NPC benefits that would have flowed back through the EBA without the RTM.[48] In such a situation, the surcharge would act to "claw back" the incremental NPC benefit from the repowering projects that would have been passed through to customers through the EBA. The cap was designed to limit customers' downside risk during the RTM effective period by capping customers' cost responsibility at a level that would be entirely offset by the incremental NPC benefits that flow through the EBA.

RMP continues to propose a cap on the amount of net repowering costs subject to the RTM, so there will be no net rate increase to customers, absent a rate case. However, the Company now proposes to separately defer the net costs in excess of the cap associated with tax law changes, and seek recovery through an offset to the deferral for the impacts from tax reform, which the Commission is addressing in Docket No. 17-035-69.[49] As I understand it, RMP would seek to recoup from Utah customers $10.339 million in projected increased costs resulting from the project in 2019-2021 that it attributes to the reduced tax rate by debiting its tax reform deferral.[50]

Q. What is your response to the Company's new proposal to separately defer and recover net costs in excess of the cap associated with tax law changes?

A. In its direct and rebuttal filings, RMP touted the customer protections afforded by its proposed RTM cap, claiming that the Company would bear the risk of costs

[48] Direct Testimony of Jeffrey K. Larsen, pp. 14-15.

[49] Supplemental Direct Testimony of Joelle R. Steward, p. 6.

[50] See RMP Response to OCS Data Request 13.10, Attach OCS 13.10, the pertinent portion of which is included in UAE Exhibit No. 1.3RE.

exceeding benefits in any given year until the project is fully reflected in base rates.[51] The Company's new proposal to defer and recover net costs in excess of the cap would undermine the customer risk mitigation originally intended by the cap, by exposing customers to net revenue requirement increases resulting from repowering, to the extent such increases can be attributed to tax law changes. RMP's proposal to recoup these projected revenue requirement increases from customers through an offset to its tax reform deferral would further shift the near-term benefits of this opportunity investment in favor of the Company compared to the original cap proposal. My primary recommendation to reject the RTM notwithstanding, if some version of the RTM is approved, I recommend that the Company's original proposal to cap the surcharge at the amount of incremental NPC benefits be retained, with no deferral of costs exceeding the cap.

Q. Please summarize your overall recommendation concerning the RTM.

A. The RTM should not be approved. The proposed mechanism is quite complex. This departure from conventional ratemaking practice is not necessary and, taken as a whole, is not desirable. Because the RTM is an exercise in single-issue ratemaking, it brings with it attendant concerns about the efficacy of identifying costs and setting rates in isolation. Rather than adopting the RTM, I believe it would be preferable for RMP to instead file a general rate case at the appropriate time to recover its repowering costs in the context of the Company's overall costs and revenues.

[51] Direct Testimony of Jeffrey K. Larsen, p. 2; Rebuttal Testimony of Jeffrey K. Larsen, p. 9.

However, if the RTM is approved, it should be modified. In particular, the Company's proposed long-term continuation of the RTM as a PTC tracking mechanism should be eliminated. PTCs are not tracked today in the manner proposed by the Company, nor is it necessary to track PTCs going forward to ensure just and reasonable rates. Therefore, I recommend that if the RTM is approved, the Company's proposal for a long-term PTC tracker be rejected. In addition, the Company's original proposal to cap the surcharge at the amount of incremental NPC benefits should be retained, with no deferral of costs exceeding the cap.

Finally, if a form of an RTM is adopted, the treatment of property tax expense should be modified to take into account the expected reduction in property tax on existing plant that would occur as the repowering project is implemented and existing plant is retired, as I discussed in my rebuttal testimony.

Q. Does this conclude your response testimony?

A. Yes, it does.