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BEFORE THE PUBLIC SERVICE COMMISSION OF UTAH

In the Matter of Rocky Mountain Power's Proposed Tariff Revisions to Electric Service Schedule No. 37, Avoided Cost Purchases from Qualifying Facilities	Docket No. 17-035-T07
	Docket No. 17-035-37
In the Matter of Rocky Mountain Power's 2017 Avoided Cost Input Changes Quarterly Compliance Filing	**DIRECT TESTIMONY OF NEAL TOWNSEND**

The Renewable Energy Coalition, (the "**Coalition**") hereby submits the attached Direct Testimony of Neal Townsend on behalf of the Coalition in this combined docket.

Respectfully submitted this 3rd day of October, 2017.

SMITH HARTVIGSEN, PLLC

/s/ Adam S. Long
Adam S. Long
Attorney for Renewable Energy Coalition

CERTIFICATE OF SERVICE

I hereby certify that a true and correct copy of the foregoing was served on this 3rd day of October, 2017 upon the following as indicated below:

Via hand delivery and email to:

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/s/ Adam S. Long

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In the Matter of Rocky Mountain Power's Proposed Tariff Revisions to Electric Service Schedule No. 37, Avoided Cost Purchases from Qualifying Facilities	**Docket No. 17-035-T07**
In the Matter of Rocky Mountain Power's 2017 Avoided Cost Input Changes Quarterly Compliance Filing	**Docket No. 17-035-37**

PREFILED DIRECT TESTIMONY OF NEAL TOWNSEND

On behalf of the Renewable Energy Coalition

Docket Nos. 17-035-T07 & 17-035-37 (Consolidated)

October 3, 2017

INTRODUCTION

Q Please state your name and business address.

A My name is Neal Townsend. 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 On whose behalf are you testifying in this proceeding?

A My testimony is being provided on behalf of the Renewable Energy Coalition (the "Coalition").

Q Please describe your educational background.

A I received an MBA from the University of New Mexico in 1996. I also earned a B.S. degree in Mechanical Engineering from the University of Texas at Austin in 1984.

Q Please describe your professional experience and background.

A I have provided regulatory and technical support on a variety of energy projects at Energy Strategies since I joined the firm in 2001. Prior to my employment at Energy Strategies, I was employed by the Utah Division of Public Utilities as a Rate Analyst from 1998 to 2001. I have also worked in the aerospace, oil and natural gas industries.

Q Have you previously filed testimony before this commission?

A Yes. Since 1997, I have testified in 15 dockets before the Utah Public Service Commission on electricity and natural gas matters.

Q Have you testified before utility regulatory commissions in other states?

A Yes. I have testified in utility regulatory proceedings before the Arkansas Public Service Commission, the Illinois Commerce Commission, the Indiana Utility Regulatory Commission, the Kentucky Public Service Commission, the Michigan Public Service Commission, the New Mexico Public Regulation Commission, the Public Utilities Commission of Ohio, the Public Utility Commission of Oregon, the Public Utility Commission of Texas, the Virginia Corporation Commission, the Public Service Commission of West Virginia, and the Washington Utilities and Transportation Commission.

OVERVIEW AND CONCLUSIONS

Q What is the purpose of your direct testimony in this proceeding?

A My testimony responds to several changes proposed by Rocky Mountain Power ("RMP", "PacifiCorp", or the "Company") for calculating avoided cost pricing to Qualifying Facilities ("QFs") under Schedule 37 and addresses certain issues regarding the calculation of avoided costs under Schedule 38 within the framework of the Proxy/Partial Displacement Differential Revenue Requirement ("Proxy/PDDRR"). The Proxy/PDDRR is the method currently used by the Company for calculating Schedule 38 avoided costs and RMP is advocating in this proceeding that it be adopted for calculating Schedule 37 rates. I also respond to the Company's assertion that the 2021 Wyoming Wind project planned by the Company should not be the basis of avoided cost pricing. In addition, I respond to RMP's discussion of an alternative approach to measuring the avoided benefit

of deferred production tax credits ("PTCs") in which they would be removed from the real levelization payment calculation and measured instead over their 10-year life.

Q What are your primary conclusions and recommendations?

A Since renewable resources are included in the 2017 Integrated Resource Plan ("IRP"), it makes sense to recognize that renewable QFs can defer the Company's renewable generation investments. Therefore, RMP's proposal to calculate avoided costs for a renewable QF based on the avoided cost of a Company renewable resource is a positive development. However, RMP's proposal to limit the displacement of a renewable resource to resources of the same type as the QF is unduly restrictive and unreasonable. Instead, any renewable QF seeking pricing under either Schedule 37 or Schedule 38 should be able to have its avoided cost pricing determined based on displacement of the next renewable resource irrespective of type, with appropriate adjustments for capacity equivalence. If the Commission adopts the Company's proposed Proxy/PDDRR method for Schedule 37 rates, then the total avoided capacity and energy cost that results from removing the "like for like" restriction will more reasonably reflect the avoided cost of the deferred resource. In addition, removing the "like for like" restriction will provide more reasonable pricing for Schedule 38 power within that same framework based on the combined capacity and energy costs.

I further recommend that the Commission rule affirmatively that the 2021 Wyoming Wind resource should be considered as an appropriate proxy for the purpose of determining avoided capacity and energy costs for all renewable QFs seeking avoided cost pricing under either Schedule 38 or Schedule 37, unless and until PacifiCorp

declares that it is not going to pursue this project, whether that declaration results from a Commission order rejecting preapproval for the project in Docket 17-035-40 or for any other reason. At that point, I would recommend that this resource be removed from the avoided cost calculation until a new IRP is issued or PacifiCorp otherwise announces a new major planned resource acquisition. In addition, the Commission should consider whether Schedule 37 and Schedule 38 renewable QFs should be credited with (the equivalent of) avoided transmission costs given the linkage between development of the 2021 Wyoming Wind resource and the addition of the related new Wyoming transmission capability.

Finally, I recommend that the Commission reject RMP's suggestion that federal PTCs should be removed from the real levelization payment calculation and measured instead over their 10-year life.

PROPOSED CHANGES TO THE CALCULATION OF SCHEDULE 37

Q What is Schedule 37?

A Schedule 37 provides published avoided cost prices approved by the Commission for smaller QFs. Schedule 37 prices are available for cogeneration facilities up to 1 MW in size and for small power production facilities, such as wind, solar, and hydro, up to 3 MW.

Q Is RMP proposing any changes to the calculation of Schedule 37 avoided cost pricing in this docket?

A Yes. In its May 30, 2017 direct testimony in Docket No. 17-035-T07, RMP proposed changes to several avoided cost inputs, including market prices, which were updated

using the Company's March 31, 2017 Official Forward Price Curve, as well as integration costs and wind and solar capacity contributions that were updated based on the assumptions and results of RMP's 2017 IRP, which was filed on April 4, 2017.

In addition to these input updates, RMP is proposing several changes to its Schedule 37 pricing methodology, which are discussed by RMP witness Daniel J. MacNeil in both his May testimony and in his August 17, 2017 direct testimony in this consolidated docket filing. I discuss these proposed changes in methodology below.

Q What is the current methodology for setting Schedule 37 rates in Utah?

A Schedule 37 rates, which were approved by the Utah Public Service Commission on May 27, 2016, are based on sufficiency-period avoided costs that are calculated using two GRID model simulations. The first simulation excludes any new QF resources. The second simulation includes an additional 10-MW baseload QF resource at zero cost and displacement of front-office-transactions. The avoided energy cost is determined by the resulting net power cost difference between the two GRID runs divided by the energy produced by the QF resources. Avoided energy costs during a deficiency period begin coincident with the next deferrable major thermal resource identified in PacifiCorp's most recent IRP or IRP update and are equal to the fixed and variable costs of a proxy resource, which is currently a combined cycle combustion turbine.

Q What changes does the Company propose to make in its filing for Schedule 37?

A As explained by Mr. MacNeil in his August 17, 2017 testimony, RMP proposes that Schedule 37 rates specific to each resource type be calculated using the Proxy/PDDRR method that was approved by the Commission for determining non-standard avoided

costs under Schedule 38, including RMP's proposed restrictions I discuss in this testimony. The Company proposes that the following specific changes be adopted in combination with the use of the Proxy/PDDRR method:

- Renewable resources would displace the next deferrable "like" renewable resource identified in the preferred portfolio of the 2017 IRP, after the queue of potential QFs. For non-renewable resources, or if no "like" renewable resources remain in the 2017 preferred portfolio through the expected term, the next deferrable major thermal resource would be displaced, after accounting for the potential QF queue.
- Avoided energy costs would be calculated using the expected output of a 10 MW resource of each type and would be net of the value of displaced resources from the 2017 IRP preferred portfolio.[1]

Q Are you familiar with the Proxy/PDDRR method used for deriving avoided cost pricing under Schedule 38?

A Yes, I participated in the Utah Docket No. 03-035-14, the proceeding in which using the Proxy/PDDRR was first established as the basis for avoided cost pricing.

Q Are you taking a position regarding whether the current Schedule 37 framework or the new Proxy/PDDRR method should be used for deriving avoided cost pricing under Schedule 37?

A No. My proposal is indifferent with respect to which framework is used to calculate Schedule 37 rates. Regardless of which framework is used, my testimony recommends that the renewable avoided cost rate used for Schedule 37 should not be limited to a "like

[1] May 2017 Direct testimony of Daniel J. MacNeil, p. 3.

for like" resource. Any renewable resource that is eligible for Schedule 37 should be able to defer PacifiCorp's next planned major renewable resource acquisition. This is possible under either the current Schedule 37 pricing framework or the Proxy/PDDRR method, and will produce more reasonable rates.

Q What is your assessment of these proposed changes?

A As I stated above, since renewable resources are included in the 2017 IRP, it makes sense to recognize that renewable QFs can defer the Company's renewable generation investments. Therefore, RMP's proposal to calculate avoided costs for a renewable QF based on the avoided cost of a Company renewable resource is a positive step. However, I recommend that the "like for like" eligibility *restrictions* proposed by the Company be rejected.

Under the Company's proposal, a renewable Schedule 37 QF could only be credited with avoiding the cost of a renewable resource of the same type, i.e., a wind QF could only be credited with deferring a wind plant in the IRP, a solar QF could only be credited with deferring a solar plant in the IRP, and so on. The implication of this restriction is that a renewable QF using a resource whose next deferability occurs relatively late in the IRP, such as solar, would be precluded from being credited with deferring any renewable facilities that are deferrable earlier in the IRP, such as wind. Similarly, a renewable resource such as small hydro, which does not appear as a deferrable resource in the 2017 IRP, could conceivably be precluded from receiving capacity credit for deferring any renewable resources at all.

These restrictions are unreasonable because they prevent a renewable QF from being fairly compensated for its ability to defer renewable plants that the Company is planning to add, solely because the QF's resource type differs from the resource type that the Company determines is deferrable sooner in its IRP. Implicit in RMP's advocacy for these restrictions is the notion that the Company is somehow unable to partially (or wholly) defer a wind plant when a renewable QF using a different technology timely comes on line.

This premise strikes me as highly implausible. When considering adding new resources in its IRP, the Company must consider the impact of long-term QF contracts on the need for Company-owned capacity after taking account of the capacity characteristics of the QF resources. This evaluation must be performed irrespective of QF resource type. The idea, say, that new solar QF contracts would have no influence on whether Company-owned wind resources need to be added in the future is unreasonable and objectionable.

Q Does RMP explain its rationale in limiting renewable displacements to "like for like" situations?

A RMP argues that its proposed restrictiveness is justified because "wind, solar, and geothermal resources identified in the 2017 IRP preferred portfolio are components of the least-cost, least-risk portfolio of resources needed to meet system load over time."[2] Mr. MacNeil goes on to state:

> [L]abeling resources as "renewable" is not relevant to the composition of the preferred portfolio. Instead, the renewable resources in the IRP

[2] August 2017 Direct Testimony of Daniel MacNeil, p. 11.

> preferred portfolio were selected based on their specific operating characteristics. Limiting deferral to QFs of the same type helps ensure reasonable alignment between the operating characteristics of a QF and the preferred portfolio resources it is assumed to defer, which in turn helps ensure that the least-cost, least-risk outcomes achieved by the preferred portfolio are maintained.[3]

Q What is your response to this reasoning?

A Simply because particular renewable resources are in the IRP preferred portfolio as cost-effective resources should not make them immune from being displaced by renewable QFs of different resource types, after appropriate adjustments for capacity equivalence. The applicability of my argument here does not depend on the Company resources not being cost effective. It simply means that the QF pricing would be based on displacement of a cost-effective resource.

Q Does Mr. MacNeil offer any other justification for his "like for like" proposal?

A Yes. He calculates illustrative avoided cost prices that would be obtained for hypothetical solar, biomass, and wind QFs credited with displacing the Company's 2021 Wyoming Wind resource (notwithstanding RMP's claim that this resource is not displaceable by a new QF). Mr. MacNeil contends that the resulting pricing for the solar and biomass QFs are not reasonably consistent with the Company's capacity needs and costs. He also comments critically that the resultant avoided costs make it more likely that a solar QF would be expected to elect a ten-year contract term than a longer term because its PDDRR-calculated value (excluding market floor) declines significantly after ten years.

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[3] August 2017 Direct Testimony of Daniel MacNeil, p. 11-12.

Q What is your response to this justification?

A It is RMP's costs that are being avoided. If, for some reason, the resulting avoided costs appear too high to the Company, the cause is directly traceable to the assumed costs of the Company's owned planned resources. Further, Mr. MacNeil's calculations exclude any avoided transmission costs associated with the QF resources, even though incremental transmission expense is an integral part of the successful completion of the 2021 Wyoming Wind resource. If avoided transmission cost was included in the avoided cost pricing, the QF pricing after 10 years would not be nearly as low as depicted by Mr. MacNeil. Finally, there is no small irony in RMP's criticism that a QF may prefer a shorter-term contract in certain situations – in light of the Company's several recent attempts to limit QFs to short-term deals.

Q Are you aware of any situations in Utah in which avoided costs are determined on a "like for like" basis?

A Yes, capacity payments for renewable QF resources under Schedule 38 are based on the capital costs of the next "like" deferrable renewable resource, so long as such a cost-effective renewable resource is present in the Company's planned resources.[4]

Q Since "like for like" renewable deferrals are currently approved for Schedule 38, why should the "like for like" restriction proposed by RMP for Schedule 37 be rejected in this proceeding?

A In this proceeding, RMP is seeking a change in methodology for calculating Schedule 37 avoided costs. Therefore, it is appropriate to consider at this time whether the restrictions

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[4] Re the Application of Rocky Mountain Power for Approval of Changes to Renewable Avoided Cost Methodology for Qualifying Facilities Projects Larger than Three Megawatts, Docket No. 12-035-100, Order on Phase II Issues at 20, (August 16, 2013).

proposed by RMP in the "like for like" approach are reasonable – for both Schedule 37 and Schedule 38. I believe these restrictions are *not* reasonable.

While having the "like for like" alternative available for pricing renewable QF capacity is an improvement over basing avoided costs for renewable QFs solely using thermal deferrals, it is problematic for the "like for like" concept to be used restrictively to preclude the capacity from a solar QF, say, from being priced based on displacing a Company wind plant.

Q If a solar QF is credited with partially displacing a Company wind plant, doesn't that create a mismatch between the capacity of the deferred wind plant and the solar QF?

A It is true that solar and wind plants have different capacity availabilities and that difference needs to be taken into account in determining the QF's capacity credit. But, of course, capacity-equivalence calculations are already used when renewable QFs displace thermal units. Determining the capacity equivalence when a solar or another renewable resource displaces wind is a logical extension of this current practice.

Q Since solar resources generally have higher capacity availabilities than wind resources, wouldn't allowing solar QFs to displace Company wind plants result in capacity payments to solar QFs that are too high?

A No. Because solar resources generally have higher capacity availabilities than wind resources, it stands to reason that when an avoided wind capacity value is translated into a payment structured as "per-MW of solar capacity," the avoided capacity price, in isolation, may appear high at first glance. However, examining avoided capacity prices in isolation is misleading because, in accordance with the Proxy/PDDRR method, capacity and energy prices for any QF are inextricably linked. If both are considered in

tandem, then the combined result will temper the impact of capacity pricing viewed in isolation.

Capacity pricing and energy pricing must be considered in tandem because the GRID runs used to determine avoided energy costs also take into account the displacement of the output from the deferred resource. So, for example, if a 1 MW east-side tracking solar facility were to displace 3.8 MW of east-side wind in the determination of avoided capacity price, then the GRID run (starting in the deferral year) would remove 3.8 MW worth of wind resources in the "with QF" case.[5] This means that the tracking solar resource – which would produce 2,716 MWh per year in this example – would be responsible for displacing 13,715 MWh per year of nearly free energy (at the margin) from the deferred wind plant.[6,7] The net effect of such a displacement is minimal, or even negative, avoided energy cost (in isolation) for a tracking solar QF when tracking solar displaces wind. Further, if the displaced wind plant is eligible for production tax credits ("PTCs"), the foregone benefit from the PTCs will be included in the avoided cost calculation.[8] Combining the very low or negative avoided energy cost

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5 The 3.8 MW of east-side wind displacement is derived by applying the ratio of the capacity contribution of each resource type. The IRP east-side tracking solar capacity contribution is 59.7%; the IRP east-side wind capacity contribution is 15.8%. The ratio is 59.7%/15.8% = 3.8.

6 IRP east-side tracking solar energy = 1 MW x 31% capacity factor x 8,760 = 2,716 MWh.
IRP east-side Wyoming wind energy = 3.8 MW x 41.2% capacity factor x 8,760 = 13,715 MWh.

7 The wind energy is not entirely free because wind integration costs must also be taken into account.

8 For planning purposes, RMP treats PTCs as a negative fixed cost, and thus an offset against capacity costs.

with the seemingly "too-high" avoided capacity cost – and taking into consideration foregone PTCs when applicable – produces a *total* avoided cost that reasonably represents the true avoided cost of the displaced wind plant within the framework of the Proxy/PDDRR method. So, while, in isolation, both the avoided capacity cost *and* avoided energy cost may appear to be unreasonable (one too high, the other too low), taken together, they produce an accurate avoided cost result within the Proxy/PDDRR framework.

Ultimately, it is RMP's costs that are being avoided through the Proxy/PDDRR calculation. So long as the all-in price paid to the renewable QF reasonably reflects the costs avoided by the Company after taking into account the capacity equivalence and energy displacement provided by the QF resource, it should not matter whether the Company's next deferrable renewable plant is being deferred by a wind QF, solar QF, or a renewable QF using another technology.

Q Does RMP's proposal to limit the deferral of a renewable resource to resources of the same type as the QF have real implications, or are your concerns primarily theoretical?

A There are real-world ramifications of the Company's proposal to restrict the deferral of a renewable resource to resources of the same type as the QF. According to Mr. MacNeil's testimony, the next deferrable resource for a Schedule 37 wind resource occurs in 2031, whereas for a Schedule 37 solar QF it does not occur until 2035.[9] The implication of RMP's proposal in this case is that wind QFs potentially could be credited with deferring a 2031 renewable resource, but a solar QF would not be given credit for deferring any

[9] May 2017 Direct Testimony of Daniel J. MacNeil, p. 11.

renewable resources until 2035. In this situation, the capacity value of a solar deferral would be delayed for an additional four years relative to a wind deferral, significantly delaying the capacity recognition for a solar QF relative to wind. For other types of renewable QFs, i.e., those using technologies not utilized by RMP in the IRP, there might not be any recognition of deferrable renewable capacity at all.

The Company's "like for like" restrictions are arbitrarily restrictive and therefore are unreasonable.

Q Are there other practical impacts of PacifiCorp's proposal?

A Yes. This additional four-year period is not inconsequential give that QFs are limited to 15-year contracts in Utah. A QF that begins delivering power in 2018, will be paid only avoided energy prices until it starts deferring the capital costs of the next major resource. A QF that has to wait until 2035 to defer the next major renewable resource would not be paid its avoided capacity, as its contract would expire in 2033.

The option for a renewable QF to choose between deferring a renewable rate (and transferring its renewable energy certificates once it starts deferring the costs of a renewable resource) and a non-renewable rate based on the costs of thermal resource is also important. Given PacifiCorp's long planning periods in which it will not acquire certain types of resources for a decade or more, it is important to allow renewable QFs the choice to defer the next major resource acquisition. Thus, when PacifiCorp is planning on acquiring new renewable resources, then renewable QFs can help defer those planned resources, and when PacifiCorp is planning on acquiring new thermal resources, then renewable QFs can help defer those planned resources.

Q Please summarize your recommendation to the Commission on the question of whether avoided cost calculations for renewable resources under Schedule 37 should be limited to deferring resources of the same type.

A For the purpose of avoided cost pricing using either the current Schedule 37 methodology or the Proxy/PDDRR method, the deferral of a renewable resource in the IRP by a Schedule 37 renewable QF should not be limited to resources of the same type. Rather, any renewable QF should be able to have its avoided cost pricing determined based on deferral of the next renewable resource irrespective of type, with appropriate adjustments for capacity equivalence. The total avoided capacity and energy cost that result will reasonably reflect the avoided cost of the deferred resource and therefore is a reasonable basis for pricing power produced by renewable QFs.

PROPOSED CHANGES TO THE CALCULATION OF SCHEDULE 38

Q What is Schedule 38?

A Schedule 38 defines the avoided cost pricing procedures for non-standard QFs. The non-standard QF pricing procedures apply to facilities with a design capacity greater than 1 MW for a cogeneration facility or greater than 3 MW for a small power production facility, such as wind, solar, and hydro, who desire to make sales to the Company, and to QFs who are not able to obtain pricing under Schedule 37 because the Schedule 37 cap has been reached. As explained in its August 17, 2017 direct testimony in this consolidated docket, RMP uses the Proxy/PDDRR method to determine avoided cost pricing under Schedule 38. Unlike Schedule 37 where the prices are published in RMP's

tariff, Schedule 38 prices are determined for each specific QF requesting avoided cost pricing.

Q Generally, how does the Proxy/PDDRR method calculate avoided cost for Schedule 38?

A As explained in Mr. MacNeil's August 2017 direct testimony, the Proxy/PDDRR method is an IRP-based approach for determining avoided cost which provides prices to QF projects that are directly derived from comparison to the Company's least-cost plan. Unlike the current calculation of Schedule 37 avoided costs, which uses a generic 10 MW resource, the Proxy/PDDRR method used in Schedule 38 is designed to pay QFs the same costs that the Company avoids based on the long-term least-cost plan described in RMP's most recent IRP based on the specific operating characteristics of the proposed QF.

There are two components to the avoided cost pricing – energy and capacity. To calculate avoided energy costs, two GRID model runs are performed, one reflecting the current IRP planned resource portfolio, and a second one with the QF project seeking pricing included as a resource and the next deferrable resource decremented by the size of the QF with adjustments for the appropriate capacity contribution. If the next deferrable resource is a thermal plant, it has typically been a combined-cycle combustion turbine, consistent with RMP's past IRPs, although the next thermal resource in the 2017 IRP is a simple-cycle combustion turbine scheduled for 2029. The difference in the two GRID runs forms the energy portion of the value created by adding the QF to the portfolio.

The other avoided cost portion, the avoided capacity cost, is based on the timing of the next deferrable plant in the IRP. In compliance with modifications made to the

Proxy/PDDRR method in Docket No. 12-035-100, if the IRP preferred portfolio included renewable resources that are of the same type as the QF project, then the avoided capacity costs were ordered to be based on the next deferrable renewable resource. If the IRP preferred portfolio does not include a renewable resource of the same type, the avoided capacity costs are based on the next deferrable thermal resource.[10]

Q What modifications is RMP proposing for calculating avoided cost pricing for Schedule 38 non-standard renewable QFs?

A As explained by Mr. MacNeil, RMP is proposing, for the first time, to calculate avoided cost prices for non-standard renewable QFs using the Commission directive from Docket 12-035-100 for the Proxy/PDDRR method. As I stated above, in general, under previous IRPs the Proxy/PDDRR method has assumed that QFs partially displace the Company's next thermal resource in the IRP based on the QFs' capacity contributions. In this proceeding, RMP is proposing a variation on this approach for renewable QFs to implement the Commission-ordered method. Specifically, avoided costs for renewable QFs would be calculated by assuming renewable QFs would partially defer the next major renewable resource *of the same type* in the Company's IRP preferred portfolio. By "same type," RMP means QFs having the same operating characteristics.

Q What is your assessment of RMP's proposed approach to determining avoided cost pricing for non-standard renewable QFs?

A Generally, the Company's proposal moves in the right direction. However, there are some refinements that should be made to ensure a fair and level playing field for QFs of

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[10] Re the Application of Rocky Mountain Power for Approval of Changes to Renewable Avoided Cost Methodology for Qualifying Facilities Projects Larger than Three Megawatts, Docket No. 12-035-100, Order on Phase II Issues at 20, (August 16, 2013).

differing resource types. Neither the fact that I am not addressing every aspect of PacifiCorp's filing, nor my silence on any particular aspect of PacifiCorp's proposal, should be construed as support for the underlying methodology or any specific change.

Q What aspect of the Company's proposal do you support?

A As I noted above in my Schedule 37 testimony, I think it is reasonable to adapt the Proxy/PDDRR so that all renewable QFs are provided avoided cost pricing based on the deferral of the next renewable resource in the IRP. In this area, I believe RMP is moving in the right direction.

Q What aspect of the Company's proposal requires modification in your opinion?

A Similar to my Schedule 37 arguments above, I believe the Company's proposal to limit the deferral of a renewable resource to resources of the same type as the QF is unduly restrictive and unreasonable. This limitation should be relaxed as I discuss below.

Q Why do you believe the Company's proposal to limit the deferral of a renewable resource to resources of the same type as the QF is unduly restrictive and unreasonable?

A Under the Company's proposal, a renewable QF could only be credited with avoiding the cost of a renewable resource of the same type (or similar operating characteristics), i.e., a wind QF could only be credited with deferring a wind plant in the IRP, a solar QF could only be credited with deferring a solar plant in the IRP, and so on. A renewable QF using a resource that the Company plans to add relatively late in the IRP, such as solar, would be precluded from receiving credit for deferring any renewable facilities that are added earlier in the IRP, such as wind.

As I discussed with respect to Schedule 37 above, these restrictions are unreasonable because they prevent a renewable QF from being fairly compensated for its ability to defer renewable plants that RMP is planning to add, solely because the QF's resource type differs from the resource type that the Company is planning to add in its IRP.

Q What is RMP's justification for the restrictiveness of its proposal?

A For Schedule 38, RMP is attempting to implement the Proxy/PDDRR method ordered by the Commission in Docket 12-035-100. In this current docket, RMP presents arguments for continuing to impose this restriction for Schedule 38 avoided cost pricing. The arguments for the restrictiveness of its proposal are the same for avoided cost pricing under both Schedule 37 and Schedule 38.

Q Please summarize your recommendation to the Commission on the question of whether avoided cost calculations for renewable resources should be limited to deferring resources of the same type.

A Like my Schedule 37 recommendation, for the purpose of avoided cost pricing using the Proxy/PDDRR method, the deferral of a renewable resource in the IRP by a Schedule 38 renewable QF should not be limited to resources of the same type. Rather, any renewable QF should be able to have its avoided cost pricing determined based on deferral of the next renewable resource irrespective of type, with appropriate adjustments for capacity equivalence. The total avoided capacity and energy cost that results will reasonably reflect the avoided cost of the deferred resource and is therefore a reasonable basis for pricing power produced by non-standard renewable QFs.

TREATMENT OF THE 2021 WYOMING WIND RESOURCE IN DETERMINING AVOIDED COST PRICING UNDER SCHEDULES 37 & 38

Q Is RMP raising any doubts about whether wind QFs potentially could be credited with deferring a 2021 renewable resource?

A Yes. The preferred portfolio in the Company's 2017 IRP calls for 1,100 MW of new wind resources to be added in 2021. In his August 2017 direct testimony, Mr. MacNeil states:

> The 1,100 MW of new Wyoming wind resources eligible for the full value of production tax credits (PTCs) that are added in 2021 (as a proxy for a December 31, 2020 in-service date to ensure the assumed tax benefits are achieved) is tied to the Aeolus-to-Bridger/Anticline transmission line. The new wind and transmission associated with this project provides all-in economic benefits to the Company customers in all jurisdictions. Therefore, QF projects that do not interconnect with and/or use the Company's Wyoming transmission system (*i.e.*, Utah QFs) to deliver energy and capacity in this timeframe would not partially displace or defer any of the 1,100 MW of new wind associated with the project.[11]

Q Does RMP provide any supporting rationale for its position?

A RMP identifies two characteristics that it claims make this project non-deferrable using the Proxy/PDDRR method. First, the Company notes that the new wind resource cannot be delayed until a later date and still qualify for the PTC tax benefit. Second, the transmission line that is required for the new wind project cannot be reduced in size.[12]

Q Did RMP provide other statements about the treatment of the new 2021 Wyoming wind in determining avoided costs?

A Yes, in his May 2017 testimony, Mr. MacNeil states that:

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[11] August 2017 Direct Testimony of Daniel J. MacNeil, p. 17.
[12] Id., p. 18.

> The addition of a Utah wind QF project would not defer the new wind and transmission planned to come online by the end of 2020 in PacifiCorp's 2017 IRP preferred portfolio. Given the net benefits these projects provide to PacifiCorp's retail customers, it will pursue these projects even if new QF projects were added to the system in Utah.[13]

Q What is your reaction to these assertions?

A These are very interesting statements. RMP is essentially saying that the Company considers the 2021 Wyoming Wind resource to be such a good deal for customers that the Company will acquire as much of it as it physically can, irrespective of the availability of other supplies such as QF power, limited only by the transfer capability of the transmission system to deliver the 2021 Wyoming Wind to load (after taking into account the related transmission upgrade the Company is proposing). This is tantamount to declaring that the Company's demand for long-term power supply at the price of this resource is open-ended over some significant range. That being the case, the 2021 Wyoming Wind project clearly represents a reasonable basis for determining the avoided cost for renewable QFs under both Schedule 37 and Schedule 38. Since, by its own admission, RMP's demand for long-term power at this price is open-ended over a significant range, it stands to reason that Schedule 37 and Schedule 38 renewable QFs that can provide long-term resources at the same cost RMP is incurring should be paid that same price. Notably, because of the unusual, open-ended nature of RMP's demand for long-term power at this price, it should not be necessary for the QF to actually displace the 2021 Wyoming Wind to qualify for this price, since RMP has declared the 2021 Wyoming Wind as "non-displaceable" (because the Company considers it to be

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[13] May 2017 Direct Testimony of Daniel J. MacNeil, p. 11.

such a good deal). Further, the Company's reference to the PTC expiration as somehow precluding deferability does not make sense on its face. The displacement of a Company resource that is PTC-eligible would certainly be addressed in the calculation of avoided costs.

In addition, the Company's assertion regarding the 2021 Wyoming Wind raises the question as to whether a Schedule 37 renewable QF should be credited *additionally* with (the equivalent of) avoided transmission costs, since the 2021 Wyoming Wind resource apparently requires incremental transmission investment from the Company in order to provide its benefits. It stands to reason that a QF that could provide a long-term resource at the same cost as RMP's 2021 Wyoming Wind, but without the associated transmission, would actually provide even more benefit to the Company's customers.

Q What is your recommendation to the Commission regarding the treatment of the 2021 Wyoming Wind resource in the determination of avoided costs?

A I recommend that the Commission rule affirmatively that the 2021 Wyoming Wind resource should be considered as partially displaceable or deferrable for the purpose of determining avoided capacity and energy costs unless and until the Company's request for preapproval of the 2021 Wyoming Wind resource in Docket No. 17-035-40 is rejected by the Commission. The Company has not sufficiently explained its assertion that this resource cannot be partially displaced or deferred by QF resources outside of Wyoming Northeast. As such, the Company's claim should be considered unsupported. The burden of proof for demonstrating that its position is reasonable should rest with RMP.

In addition, the Commission should consider whether Utah QFs should be credited with avoided transmission costs for partially displacing or deferring the 2021

Wyoming Wind resource. RMP's assertions regarding the linkage between development of the 2021 Wyoming Wind resource and the transmission project capability suggest that at least in this circumstance, avoided transmission cost could properly be included in the avoided cost pricing unless and until the Company's request for preapproval of its proposed transmission investment in Docket No. 17-035-40 is rejected by the Commission.

Q In recommending that the 2021 Wyoming wind resource should be considered partially displaceable or deferrable for the purpose of determining avoided capacity and energy costs, are you also attesting to the reasonableness of the Company's preferred portfolio in its 2017 IRP?

A No. My recommendation is based on the principle that the next deferrable renewable resource should be the basis of avoided cost pricing. I am not taking a position on whether the IRP itself is reasonable.

Q Do you have an opinion as to how the 2021 Wyoming wind resource should be treated in avoided cost pricing calculations in the event PacifiCorp decides not to pursue the new Wyoming wind project?

A Yes. The 2021 Wyoming wind resource is included in the 2017 IRP preferred portfolio. It should be included as a deferrable resource in any avoided cost calculation unless and until PacifiCorp declares that it is not going to pursue this project, whether that declaration results from a Commission order rejecting preapproval for the project in Docket 17-035-40 or for any other reason, whenever such a declaration may occur. At that point, despite the fact that the avoided cost pricing is supposed to be based on the most recent IRP, I would recommend that this resource be removed from the avoided cost calculation until a new IRP is issued or PacifiCorp otherwise announces a new major planned resource acquisition. For example, if PacifiCorp announces a new request for

proposal prior to issuing a new IRP, then that planned resource should be considered the next deferrable resource.

TREATMENT OF FEDERAL PRODUCTION TAX CREDITS ("PTCs")

Q Regarding PTCs, does RMP make any proposals for the treatment of PTCs in the determination of avoided cost pricing?

A Yes. Mr. MacNeil suggests that the PTC should be removed from the real levelization approach currently used to derive avoided cost pricing.

Q What is your recommendation to the Commission regarding the alternative PTC treatment suggested by Mr. MacNeil?

A It should be rejected. It would be inappropriate for the Company to be able to selectively include or exclude certain costs in the real levelization payment in order to disadvantage a QF. As I pointed out back in Docket 03-035-14, the costs of Company-owned resources are recovered from customers over longer periods than is being allowed for QF contracts (e.g., 40 years for a thermal unit, 30 years for wind, 25 years for solar versus 15 years for a QF contract) and, importantly, the cost recovery of Company-owned assets is front-end loaded. The capacity cost to ratepayers over the first fifteen years of a Company-owned asset is actually greater than the capacity cost to ratepayers of a fifteen-year QF contract that is based on the avoided cost of that same Company-owned asset, all things being equal. This is due to the unequal time periods for recovery.

Q Does this conclude your direct testimony?

A Yes, it does.