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BEFORE THE PUBLIC SERVICE COMMISSION OF UTAH

In the Matter of Glen Canyon Solar A, LLC and Glen Canyon Solar B, LLC's Request for Agency Action to Adjudicate Rights and Obligations under PURPA, Schedule 38 and Power Purchase Agreements with Rocky Mountain Power	Docket No. 17-035-36

PREFILED DIRECT TESTIMONY OF KEEGAN MOYER

Glen Canyon Solar A, LLC and Glen Canyon Solar B, LLC hereby submit the Prefiled Direct Testimony of Keegan Moyer in this docket.

DATED this 29th day of June 2017.

HATCH, JAMES & DODGE

/s/ Gary A. Dodge
Attorneys for Glen Canyon Solar A, LLC &
Glen Canyon Solar B, LLC

CERTIFICATE OF SERVICE
Docket No. 17-035-36

I hereby certify that a true and correct copy of the foregoing was served by email this 29th day of June 2017 on the following:

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BEFORE THE PUBLIC SERVICE COMMISSION OF UTAH

In the Matter of Glen Canyon Solar A, LLC and Glen Canyon Solar B, LLC's Request for Agency Action to Adjudicate Rights and Obligations under PURPA, Schedule 38 and Power Purchase Agreements with Rocky Mountain Power	Docket No. 17-035-36

Direct Testimony of Keegan Moyer

On Behalf of Glen Canyon Solar A, LLC and Glen Canyon Solar B, LLC

June 29, 2017

I. INTRODUCTION AND SUMMARY

Q. Please state your name and business address.

A. My name is Keegan Moyer. 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 sponsored by Glen Canyon Solar A, LLC and Glen Canyon Solar B, LLC ("**Glen Canyon Solar**"), both of which are subsidiaries of Sustainable Power Group ("**sPower**"), an independent power producer based in Salt Lake City that owns and operates utility and distributed generation systems across the United States.

Q. Please summarize your qualifications.

A. I am a principal with Energy Strategies, where I have been employed since 2014. At Energy Strategies, I assist private and public sector clients in the areas of electric transmission and energy-related economic and public policy analysis. In that capacity, I specialize in technical and economic grid studies for power generation and transmission projects. Additionally, I have performed economic assessments of regional transmission projects and have a strong understanding of regional transmission planning processes throughout the United States.

Prior to joining Energy Strategies, I was the Manager of Transmission Expansion Planning at the Western Electricity Coordinating Council. In that role, I was responsible for regional transmission assessments and the development of transmission plans for the Western Interconnection. Additionally, I led WECC's efforts to model the potential reliability impacts of EPA's 111(d) Clean Power Plan, directing a cross-functional team to perform the West's first policy-based technical analysis of the reliability implications of the rule. I was also responsible for providing leadership and direction to the WECC Transmission Expansion Planning Department, facilitating Transmission Expansion Planning Policy Committee (TEPPC) stakeholder activities, and managing the $14.5 million DOE Regional Transmission Expansion Planning (RTEP) Grant. While at WECC, I led and improved a regional planning process that helped to identify transmission needs and reliability challenges under a variety of possible energy futures. I was the lead author of 2013 WECC Interconnection-wide Plan and managed stakeholder outreach and processes associated with the Plan's development. I also advised WECC senior management on FERC Order 1000 and other relevant energy and planning policies.

In addition to my transmission planning background, I have extensive technical experience designing and conducting production cost model market studies, and providing policy-oriented analyses of complex regional power system issues. I also have experience with the FERC-approved Open Access Transmission Tariff of PacifiCorp and various other transmission service

providers, especially as they pertain to requirements and processes surrounding generation interconnection, transmission service, and transmission planning.

My academic background is in engineering and management. I have completed a Master of Science in Engineering and Technology Management and a Bachelor of Science in Engineering with Mechanical Specialty, both at the Colorado School of Mines.

In connection with my testimony in this docket, I have explored and analyzed in detail transmission and interconnection rights and availability, studies, processes and costs, and avoided cost pricing studies relevant to this docket.

Q. Have you previously testified before the Utah Public Service Commission ("Commission")?

A. No. I have, however, testified regarding transmission planning issues at the Utah Legislature.

Q. Have you testified previously before any other state utility regulatory commissions?

A. Yes. I have testified regarding transmission planning issues before the Colorado Public Utilities Commission for Commission Rule 3627 Related to Electric Transmission Facilities Planning in Proceeding NO. 14M-0110E, NO. 13M-1167, and NO. 13M-1183E.

Q. Have you given presentations related to your areas of expertise?

A. Yes, I have given numerous presentations in regional policy and system reliability forums including the WECC Board of Directors, the State and Provincial Steering Committee (SPSC), FERC Order 1000 Interregional Coordination forums, the California Renewable Energy Transmission Initiative 2.0 Joint Agency Workshop, the UAMPS Annual Conference, among other private and public events. I was selected by the U.S. Department of Energy to present to Chinese delegates on Western regional transmission planning issues during an outreach trip to Beijing. I have also served on several National Renewable Energy Lab (NREL) technical advisory groups, including wind profile dataset creation and an economic assessment of long-haul transmission.

Q. What is the purpose of your testimony?

A. My testimony is offered in support of the Request for Agency Action filed by Glen Canyon Solar in the matter before the Commission titled *In the Matter of Glen Canyon Solar A, LLC and Glen Canyon Solar B, LLC's Request for Agency Action to Adjudicate Rights and Obligations under PURPA, Schedule 38 and Power Purchase Agreements with Rocky Mountain Power* in Docket No. 17-035-36.

More specifically, my testimony focuses on four interrelated topics highly relevant to this proceeding:

(1) the processes and studies associated with generator interconnection and transmission service as well as the characterization of Network Upgrades identified in these studies;

(2) a summary of the facts regarding the Glen Canyon Solar QF projects and the transmission system connecting them to Rocky Mountain Power ("**RMP**") load, with further detail on how those facts were represented in avoided cost studies performed by RMP for Glen Canyon Solar;

(3) details surrounding options in the PacifiCorp Open Access Transmission Tariff (**"OATT"**) that would allow RMP to serve load from an appropriately sized qualifying facility ("**QF**") resource in a transmission constrained area without triggering the need for Network Upgrades; and

(4) specific ways for RMP to implement these OATT options, resulting in a suite of studies that are consistent in their assumptions while avoiding the potential for unnecessary Network Upgrade costs.

Q. Please summarize your testimony.

A. Glen Canyon Solar has entered into power purchase agreements with RMP based on avoided cost pricing for both of the Glen Canyon Solar QF projects. The pricing offered to Glen Canyon Solar was based on a series of production cost model simulations conducted by RMP where PacifiCorp resources serve their load obligations through the most economic means possible, subject to system constraints and operational realities like transmission limits and generator ramp rates. One of the constraints in the model was the 95 MW of transmission rights

held by RMP between Glen Canyon (the location of the QF projects) and PacifiCorp loads in central Utah. The modeling showed that this transmission was sufficient for the Glen Canyon Solar projects to serve RMP load, offsetting the most expensive RMP generation. The costs associated with this avoided generation were calculated by RMP and subsequently offered to Glen Canyon Solar in the form of avoided cost rates.

When conducting system planning studies it is critical to maintain consistency across study platforms, whether that be economic models used to calculate system costs or reliability models used to assess the impact of new generation. Failure to do so can lead to contradictory study results and process breakdowns. My testimony advocates for consistency across study platforms. QF resources are integrated into the RMP system by offsetting energy and capacity from generation or market purchases. QF compensation is defined by this premise, as altering the resource dispatch from the business-as-usual scenario to integrate a new QF resource forms the economic foundation for avoided cost pricing. Because of this premise and the importance of consistency in this process, RMP should direct PacifiCorp to appropriately consider the redispatch of resources when coordinating interconnection and transmission service studies for QF generators in transmission constrained areas. The OATT and the PacifiCorp Network Operating Agreement anticipate this need, providing RMP with the requisite tools to do so. This consistency is critical if RMP is to effectively discharge its obligations to the QF generator while simultaneously keeping its

ratepayers from bearing the costs of unnecessary Network Upgrades.

II. FACTS AND BACKGROUND REGARDING QF INTERCONNECTION SERVICE AND TRANSMISSION SERVICE PROCESS

Q. What processes are involved in adding a QF to the PacifiCorp Transmission system?

A. Two complicated and interrelated processes governed by the PacifiCorp OATT are involved in adding a large QF to PacifiCorp's transmission system, which is operated by PacifiCorp's transmission function ("**PacTrans**"): an interconnection request ("**Interconnection Request**"), which is focused on the interconnection and the interconnection customer (the QF); and a transmission service request ("**TSR")**, which is focused on transmission and the transmission customer that is responsible for transmission of the QF's power from the point of delivery to load. Note that these two processes are different than the process governed by Schedule 38, which is used to establish avoided cost pricing for QF generators.

Q. Why are the transmission service and interconnection processes for a QF governed by the OATT and not by Commission rules?

A. In approving Schedule 38 for RMP, which performs the merchant function for PacifiCorp in Utah, the Commission determined that the process should proceed pursuant to the OATT. As discussed below, there are two projects at issue in this docket, both of which exceed 20 MW. Under Schedule 38, interconnection and transmission requests for QF projects exceeding 20 MW,

including both of the Glen Canyon Solar QF projects, are processed pursuant to the OATT. Sheet 38.10 of Section II.B. of Schedule 38 states: "For interconnections greater than twenty (20) megawatts, the Company will process the interconnection application through PacifiCorp Transmission Services generally following the procedures … described in the Company's Open Access Transmission Tariff").

Q. What is a transmission customer, a network customer, and an interconnection customer and to whom do those terms refer?

A. A "Transmission Customer" is, as set forth in Section 1.55 of the OATT, "any Eligible Customer (or its Designated Agent) that (i) executes a Service Agreement, or (ii) requests in writing that the Transmission Provider file with the Commission, a proposed unexecuted Service Agreement to receive transmission service under Part II of the Tariff." In practical terms, the transmission customer is an entity receiving either point-to-point transmission service or network integration transmission service. A generator entering into a transmission service agreement for firm point-to-point transmission to deliver its output to a specific location on the transmission system is one example of point-to-point service. This type of transmission service is not the subject of this proceeding. Network integration transmission service, which is relevant to this proceeding, allows Network Customers to serve their network load with firm transmission. In reference to the issues presented in this docket, RMP is the transmission customer because it receives network integration transmission service from Pac Trans.

RMP has entered into Power Purchase Agreements with Glen Canyon Solar (**"GC PPAs"**), under which RMP is obligated to purchase all of the power generated by Glen Canyon Solar (up to 95 MW) (**"GC Energy"**) and delivered to the point of interconnection. RMP then is obligated to deliver or transmit the GC Energy from the point of interconnection to RMP's load.

A "Network Customer" is, as set forth in Section 1.21 of the OATT, "[a]n entity receiving transmission service pursuant to the terms of the Transmission Provider's Network Integration Transmission Service under Part III of the Tariff. The definitions of the terms "Transmission Customer" and "Network Customer" overlap somewhat. In practical terms, the network customer has network load on the PacifiCorp system and uses the PacTrans system to serve that load, on a firm basis, from a set of designated resources. In reference to the factual issues presented in this docket, RMP is the network customer because it is responsible for serving PacifiCorp retail load and has entered into the PacifiCorp Network Operating Agreement (as PacifiCorp's merchant function) with PacTrans to do so.

An "Interconnection Customer" is, as set forth in Section 1.15B of the OATT, "[a]ny Eligible Customer (or its Designated Agent) that executes an agreement to receive generation interconnection service pursuant to Part IV or Part V of this Tariff. This term is used in the Part I Common Service Provisions to include customers receiving transmission service under Part II and Part III of this Tariff." In this docket, Glen Canyon Solar is the interconnection customer because it will enter into an interconnection agreement with PacTrans to allow for

its projects to interconnect with the transmission system.

Q. Please discuss the purpose of Interconnection Service and the process that governs an Interconnection Request?

A. Section IV of the OATT governs Interconnection Requests for generators greater than 20 MWs and is commonly referred to as the Large Generator Interconnection Procedure ("**LGIP**"). The LGIP allows new generation resources to obtain Interconnection Service on the PacTrans transmission system. Interconnection Service enables the interconnecting generator to deliver both energy and capacity to the PacTrans transmission system at the point of interconnection. It does not, however, constitute transmission service. Rather, it focuses on establishing a reliable and capable interconnection to the PacTrans system.

In order to initiate a request for Interconnection Service, the interconnecting customer submits an Interconnection Request. That request allows the interconnecting customer to indicate if the new resource is to be studied as an energy resource, a network resource, or both. Once the Interconnection Request is confirmed, PacTrans hosts a scoping meeting with the interconnecting customer during which interconnection alternatives are considered, project and transmission information is exchanged, and feasible points of interconnection are identified. In effect, the purpose of the scoping meeting is to lay the groundwork and develop assumptions for the series of interconnection studies that will follow, which may include some or all of an

optional feasibility study, a system impact study ("**SIS**"), and a facilities study. The most critical of these three studies to the interconnection customer is the interconnection SIS, which relies on a set of transmission planning studies to evaluate the impact of the proposed interconnection on the reliability of the PacTrans system. The goal of the study is to identify facilities that will be required in order to grant the requested interconnection service, along with a non-binding estimate of cost and cost responsibility for the same.

The interconnection studies performed by PacTrans for an *energy resource* focus on the cost of interconnection facilities required to physically interconnect a new generator ("**Interconnection Costs**") and allow it to engage in non-firm transactions. Interconnection studies for a *network resource* similarly include analysis of needed interconnection facilities and their Interconnection Costs, but also include an initial assessment of network transmission facility upgrades ("**Network Upgrades**") necessary to support firm transmission to deliver the generation to network loads. Information provided in a network resource SIS regarding Network Upgrades and their costs is informational, since an interconnection request itself does not include or convey any transmission service or rights.

When an interconnection customer and a transmission customer are the same entity (as when RMP adds its own generation resource), the network resource studies provide a good understanding of the total upgrade costs likely required for it to interconnect and utilize the new resource to serve network loads.

When the interconnection customer and the transmission customer are different, however—as is currently the case for QFs in Utah—close cooperation and an effective flow of information between the parties and PacTrans becomes critical. Only a network customer can ask PacTrans to designate a new generating resource as a network resource. As the network customer, RMP is required by Schedule 38 to submit a TSR requesting that a QF resource become a designated network resource ("**DNR**") under RMP's network operating agreement with PacTrans. Thus, in the case of a QF the responsibility of arranging firm transmission service lies with the network customer and the responsibility for arranging interconnection service lies with the QF developer.

When a QF is located in a transmission constrained area, it is critical that RMP request studies and communicate its intent to utilize its existing transmission rights in connection with the DNR designation in order to avoid the risk of unnecessary and uneconomic network upgrades, and the corollary risk of paying for unnecessary network upgrades.

Q. Is there a distinction between "Interconnection Facilities" and "Network Upgrades"?

A. Yes. "Interconnection Facilities" and "Network Upgrades" are distinct terms. Both are defined in Section 36 of the OATT. "Interconnection Facilities" include "all facilities and equipment between the Generating Facility and the Point of Interconnection, including any modification, additions or upgrades that are necessary to physically and electrically interconnect the Generating Facility to

the Transmission Provider's Transmission System. *Interconnection Facilities are sole use facilities and shall not include . . . Network Upgrades*." (OATT § 36, "Interconnection Facilities" (emphasis added)).

By contrast, "Network Upgrades" are "the additions, modifications, and upgrades to the Transmission Provider's Transmission System required *at or beyond the point at which the Interconnection Facilities connect to the Transmission Provider's Transmission System* to accommodate the interconnection of the Large Generating Facility to the Transmission Provider's Transmission System. (OATT § 36, "Network Upgrades" (emphasis added)). FERC cases have also recognized this clear distinction. For example, in *Nevada Power Company*, 113 FERC. ¶ 61,007, 61,014-16 (FERC 2005), FERC stated that "[t]he network begins at the point where the interconnection facilities connect to the transmission system, not somewhere beyond that point," and explained: "Due to the integrated nature of the transmission grid, upgrades at or beyond the point where a customer connects to the grid benefit all users of that grid. Thus, we have rejected the direct assignment of grid facilities [costs] at or beyond the point where a customer connects to the grid."

Existing SISs provide clear examples of the difference between Interconnection Facilities and Network Upgrades. Interconnection Facilities remain the same in both energy resource and network resource interconnection studies and they typically include equipment that is mandatory to facilitate the electrical and physical connection of the resource to the PacTrans system.

Substations, new communication cables, and line loop-ins are all good examples of facilities that may be required to connect a generator to the transmission system. In contrast, Network Upgrades include equipment at or beyond the Point of Interconnection on the PacTrans system that goes beyond a simple interconnection and allows the resource to deliver its output from the point of interconnection area to network load on the PacTrans transmission system. Network Upgrades identified as a part of an interconnection study are informational since interconnection service is different than transmission service.

Q. What is your understanding of who typically pays for Interconnection Costs and Network Upgrade costs?

A. RMP's Schedule 38 provides that interconnection and transmission arrangements for QFs larger than 20 MW must be processed under the OATT.[1] While I am not an attorney, based on my understanding and experience, the OATT and FERC rules contemplate that Interconnection Costs are directly assignable to the interconnection customer—here, the QF—while Network Upgrade costs, subject to credits and refunds available under the OATT, are paid by the transmission customer—here, RMP.[2] In my view, this clear distinction

[1] Schedule 38, § II.B., at Sheet 38.10.

[2] OATT Sections 32.3 and 32.4 and Attachment N, Large Generator Interconnection Agreement, Section 4.1.2.2, Transmission Delivery Service Implications, provide: "The provision of Network Integration Transmission Service or firm Point-to-Point Transmission Service may require additional studies and the construction of additional upgrades. Because such studies and upgrades would be associated with a request for delivery service under the Tariff, cost responsibility for the studies and upgrades would be in accordance with FERC's policy for pricing transmission delivery services". Also, in FERC Order 2003, 104 FERC ¶ 61,103, page 21, FERC stated that its "interconnection

between responsibility for Interconnection Costs and Network Upgrade costs[3] is particularly important when, as here, the interconnection customer is not also the transmission customer.

Q. Please discuss the process that governs a Transmission Service Request?

A. The TSR process is governed by Section III of the OATT. The TSR process is separate and distinct from Interconnection Request process, although the studies performed and the results of the Interconnection Request process inform the TSR process. The TSR process includes additional studies, including a transmission SIS. As discussed below, as part of the TSR process, the network customer—RMP—can direct PacTrans to study various approaches to delivering QF generation output to their network load.

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cases have drawn the distinction between Interconnection Facilities and Network Upgrades. Interconnection Facilities are found between the Interconnection Customer's Generating Facility and the Transmission Provider's Transmission System. [FERC] has developed a simple test for distinguishing Interconnection Facilities from Network Upgrades: Network Upgrades include only facilities at or beyond the point where the Interconnection Customer's Generating Facility interconnects to the Transmission Provider's Transmission System. [FERC] has made clear that Interconnection Agreements are evaluated by [FERC] according to the just and reasonable standard. Most improvements to the Transmission System, including Network Upgrades, benefit all transmission customers, but the determination of who benefits from such Network Upgrades is often made by a nonindependent transmission provider, who is an interested party. In such cases, [FERC] has found that it is just and reasonable for the Interconnection Customer to pay for Interconnection Facilities but not for Network Upgrades. Agreements between the Parties to classify Interconnection Facilities as Network Upgrades, or to otherwise directly assign the costs of Network Upgrades to the Interconnection Customer, have not been found to be just and reasonable and have been rejected by [FERC]."

[3] OATT Part IV, Section 36, Interconnection Facilities, provides: "Interconnection Facilities are sole use facilities and shall not include Distribution Upgrades, Stand Alone Network Upgrades or Network Upgrades."

Q. As the transmission customer, what role does RMP play in a QF TSR?

A. Schedule 38 requires RMP, as the transmission customer, to submit the TSR within seven days of the date a PPA is executed or otherwise as early as practicable based on applicable procedures in the OATT. (Schedule 38, § II.B., at Sheet 38.10.) When it submits the TSR, RMP, as network customer, can direct PacTrans to study various forms of planning and operational redispatch (**"Redispatch"**) available under its network operating agreement with PacTrans and Section 32.3 of the OATT to avoid unnecessary upgrades when a QF is added as a DNR at an interconnection point with no remaining available transfer capability.

Q. Has RMP submitted a TSR to PacTrans for the GC PPAs?

A. It appears that RMP submitted TSRs associated with the GC PPAs to PacTrans, although it is not clear if the TSRs were timely submitted or what information or requests may have accompanied the TSRs. It is therefore difficult to know whether PacTrans will study the option assumed in setting avoided cost pricing for the Glen Canyon Solar projects of utilizing existing RMP transmission rights, including resource Redisptach.

III. FACTS AND BACKGROUND REGARDING THE QF PROJECTS AT ISSUE IN THIS DOCKET

Q. Can you describe the two QF projects at issue in this docket?

A. Yes. Glen Canyon Solar signed the GC PPAs with RMP to deliver a combined 95 MW from solar projects located in southern Utah (**"GC Resources"**). Each

of the two projects that makes up the GC Resources exceeds 20 MW.

Q. Where will the GC Resources interconnect into the grid?

A. The GC Resources will interconnect into PacTrans' Sigurd-to-Glen Canyon 230 kV transmission line (**"Sigurd-GC Line"**). Pursuant to the GC PPAs, RMP will take possession of GC Energy at a designated point of delivery and will then deliver it northward along the Sigurd-GC Line to RMP's load.

Q. Please explain the terms Total Transfer Capacity ("TTC") and Available Transfer Capacity ("ATC")?

A. OATT definitions help clarify these two terms. Total Transfer Capacity (**"TTC"**) represents the megawatts of electric energy that can be moved or transferred reliably from one area to another through transmission lines (or paths) between those areas. (OATT, Attachment C, page 261). Available transmission capacity (**"ATC"**) is a measure of a transmission path's remaining capacity to transfer incremental commercial activity above and beyond already committed uses. (OATT, Attachment C), page 260).

Q. What are the TTC and ATC along the proposed transmission path?

A. At the time Glen Canyon Solar filed its Interconnection Request (and still today), the TTC of the south-to-north transmission path along the Sigurd-GC Line was 300 MW.[4] That path is fully subscribed; there is no remaining ATC.

Q. Who holds transmission rights along the transmission path?

A. RMP holds 95 MW of long-term firm network integration transmission

[4] Note that this transmission line is also commonly referred to by its WECC Path name, which is "TOT 2B2."

service rights on this path (**"Existing RMP Transmission Rights"**). That is, of the 300 MW of TTC, RMP has 95 MW of firm network transmission rights on the path. Of the remaining 205 MW of TTC on the Path, 190 MW are allocated to the Western Area Power Administration's Colorado River Storage Project, with the remaining 15 MW reserved for a transmission reliability margin.

Q. How do you know that RMP has 95 MWs of firm transmission rights along the transmission path?

A. I have identified and confirmed this fact through multiple sources. First, RMP's response to Glen Canyon Solar's request for avoided cost pricing for the GC Resources showed and assumed that RMP holds 95 MW of firm transmission rights along the transmission path at issue here. Additionally, I reviewed the PacTrans Open Access Sametime Information System (OASIS) for transmission reservations and was able to identify RMP as the holder of 95 MW of firm transmission rights from the "GLENCANYON2" scheduling bubble to the "PACE" scheduling bubble.

Q. Please summarize RMP's approach to QF avoided cost pricing.

A. The Commission has approved RMP's use of an in-house generation dispatch model called the Generation and Regulation Initiative Decision Tool ("**GRID"**) in calculating avoided costs for larger QF projects ("**QF Model**"). To develop avoided cost pricing, the QF Model relies on two GRID studies performed by RMP, a "base case" and a "QF project case," which builds on the base case assumptions with the addition of modeling inputs reflecting the new QF

resource. By comparing the net present value revenue requirement of the two model runs, RMP determines the system value of the incremental QF energy, accounting for RMP's transmission rights and limitations and the QF's operating characteristics, location, hourly generation pattern, and resource needs and displacements, as identified through RMP's most recent Integrated Resource Plan (**"IRP"**), as periodically updated, among other factors. This calculated value, or avoided cost, is the price offered to a QF.

Q. Are transmission transfer capabilities inputs to the QF Model?

A. Yes. Transfer capabilities between transmission "bubbles" are inputs to the QF Model to reflect RMP's transmission capacity rights as modeling constraints. RMPs transmission rights across the entire PacTrans system are represented in the model. To the extent transmission or operational constraints restrict the ability of a QF to deliver its full generation output to RMP customer loads—thereby avoiding generation or purchases from other RMP resources—the model curtails QF generation. As an extreme example, if a QF project is located in an area with operational or transmission constraints that will not allow the delivery of any QF output in any hours, all QF generation would be curtailed, resulting in the avoidance of no RMP resources and reducing the avoided cost price to zero. The QF Model ensures that avoided cost prices for a QF are no higher than the costs the utility actually expects to avoid, consistent with transmission and operational constraints and with PURPA's economic indifference standard.

Q. What were the results of the QF Model runs for the GC Resources?

A. I have analyzed avoided cost pricing runs for the GC Resources in detail. They assumed 95 MW of transmission capability south to north on the link between the Glen Canyon and Utah South transmission bubbles, at which point other available transmission links provide access to other parts of the RMP system. The QF Model's 95 MW of assumed transmission capability represents the 95 MW of Existing RMP Transmission Rights.

To accurately reflect RMP's ability to serve customer load with GC Energy, the QF Model runs for the GC Resources economically redispatched other RMP generation resources and adjusted sales and purchases, subject to modeling constraints. The QF Model runs for the GC Resources thus resulted in redispatch—or backing down of purchases or generation—of other available system resources, including front office transactions and generation at Hunter, Huntington, Currant Creek and Lake Side, among others. The displacement of generation or purchases from these resources forms the basis for the avoided cost pricing offered to Glen Canyon Solar.

To clarify the concept of redispatch, or displacement, of RMP generation, I offer the following hypothetical example. Assume that a new QF solar project will generate, on average, roughly 200,000 MWh per year. This would equate to about a 30% capacity factor for an 80 MW facility. If the full amount of generation output from the QF resource is delivered to load it will avoid the need for 200,000 MWh of energy that RMP would have otherwise been obligated to

provide, either from generation or market purchases. Since the QF Model seeks to minimize costs and operate the system in the most cost effective fashion (subject to constraints), the generation that is "avoided" in the study is the least efficient and most costly energy available to RMP. The cost of this avoided generation is calculated by comparing financial results from the two model runs, and this cost forms the basis of the PPA price offered to the QF resource.

Q. Does RMP's QF Model conform with your understanding of PURPA?

A. I am not an attorney and do not hold myself out as an expert on the entirety of PURPA. I am, however, familiar with key requirements of PURPA. I am also familiar with the QF Model employed by RMP. Based on my experience and understanding, I believe RMP's QF Model conforms with key PURPA concepts. It treats QF resources as "must take" generation, consistent with my understanding of the utility's obligation to purchase QF energy on a firm basis. It also ensures customer indifference, as QF pricing is set at precisely the level of costs that the model indicates can be avoided by RMP. Furthermore, the GRID model is consistent with my understanding that the public utility, and not the QF, is responsible for delivering and using QF energy beyond the point of interconnection, by assuming the use of the 95 MW of Existing RMP Transmission Rights—effectively treating the QF project as a DNR whose dispatch is prioritized in front of non-QF DNRs.

Q. Are RMP's QF Model runs consistent with the redispatch options available under the OATT?

Yes. RMP's avoided cost pricing runs for the GC Resources appear fully consistent with the Redispatch options of RMP's Network Operating Agreement with PacTrans ("**NOA**"), which—as set forth more fully below—allow firm delivery of QF resources even when there is no ATC. Since there is no remaining ATC on the relevant path between the GC Resource and RMP load, this scenario illustrates precisely why the use of Redispatch as contemplated in the NOA is prudent and necessary, as it alleviates the need for RMP, and by extension its ratepayers, to fund expensive, uneconomic Network Upgrades, while also meeting PURPA objectives.

Q. Do you believe RMP should be required to request studies for the GC Resources consistent with the QF Modeling of Redispatch for other generation resources?

A. Yes. The results of the QF Model runs for the GC Resources show that it is feasible for RMP deliver the GC Energy to RMP loads without additional transmission rights. This option should be incorporated into both interconnection and transmission studies being conducted for these resources, and the OATT and the NOA give RMP the appropriate tools to do so. RMP would not be obligated to incorporate redispatch assumptions into transmission studies for a non-QF generator. Given RMP's status under PURPA as the purchaser of QF power and

the network transmission customer, it is incumbent upon RMP to request studies that may allow the avoidance of unnecessary and uneconomic Network Upgrades.

Despite the clear distinction between QF and non-QF resources seeking network transmission service, it appears that RMP may be deliberately seeking to have PacTrans prepare studies for the QF GC Resources without consideration of Redispatch options. Such an intent appears consistent with an effort to directly assign these costs to Glen Canyon Solar as part of Interconnection Costs, perhaps in an effort to thwart development of these QF projects.[5] Based on my reading of Schedule 38, the OATT, the NOA, and FERC cases, studies by PacTrans associated with QF resources should include studies of all available options, including Redispatch, to reduce the risk of unnecessary Network Upgrade costs.

Q. Did the QF Model runs for these QF resources reflect financial impacts of resource Redispatch?

A. Yes. Avoided cost prices included in the GC PPAs reflect financial impacts to RMP of operational resource redispatch needed for RMP to utilize the GC Energy and maintain customer indifference. Avoided cost prices are adjusted accordingly when modeling constraints prevent QF Energy from serving load or prevent other resources from being backed down, or redispatched. The QF Model is self-correcting in that avoided cost prices are reduced, potentially to zero, for a QF project located in a transmission constrained area. The QF Model thus ensures

[5] In its request for declaratory relief in Docket No. 17-035-25, RMP inaccurately claimed that Network Upgrades identified for a non-QF resource are representative of Network Upgrades needed for a QF resource, and asked the Commission to "clarify" that such Network Upgrade costs are "interconnection costs" that can be directly assigned to QFs.

that avoided cost prices are no higher than the costs the utility expects to avoid as a result of the incremental generation from the QF project, maintaining customer indifference.

Q. Does it appear that RMP's 95 MW of firm transmission rights should be sufficient to allow RMP to transmit the GC Energy to load?

A. Yes. The QF Model indicates that the 95 MW of Existing RMP Transmission Rights are sufficient to allow RMP to transmit, from the point of interconnection of the GC Resources to RMP's load, all of the GC Energy without curtailment. Indeed, it is my understanding that Glen Canyon Solar intentionally sized the GC Resources to match exactly RMP's available rights.

IV. ISSUES RELATED TO TRANSMISSION OF THE GC ENERGY ON THE SIGURD-GC LINE

Q. If there is no ATC on the transmission path, how can RMP use Existing RMP Transmission Rights to transmit the GC Energy to load?

A. As discussed above, ATC is the unsubscribed firm capacity on a transmission path available to any interested party. ATC is not a measure of un-utilized rights held by transmission customers on a transmission path. That is, a transmission path can both have zero ATC and also have zero megawatts of electric energy flowing across it. RMP has 95 MW of firm transmission rights on the Sigurd-GC Line, but it does not utilize those rights at all times, and does not utilize them for non-redispatchable resources (such as an earlier QF). RMP can thus utilize the 95 MW of Existing RMP Transmission Rights to transmit the GC

Energy, utilizing resource redispatch as needed.

Q. Please explain RMP's Redispatch options as you understand them.

A. As the network transmission customer, RMP can use various forms of planning and operational Redispatch available under its NOA with PacTrans and pursuant to Section 32.3 of the OATT to avoid unnecessary Network Upgrades when a QF is added as a DNR at an interconnection point with no remaining ATC.

Q. Please discuss RMP's Redispatch options available under the OATT?

A. Under Section 32.3 of the OATT, network transmission customers—such as RMP—have the right to utilize various Redispatch options to accommodate a new network resource even in the absence of ATC. That section provides, in relevant part:

> Upon receipt of an executed System Impact Study Agreement, the Transmission Provider will use due diligence to complete the required System Impact Study within a sixty (60) day period. The System Impact Study shall identify (1) any system constraints, identified with specificity by transmission element or flowgate, (2) ***redispatch options (when requested by an Eligible Customer)*** including, to the extent possible, an estimate of the cost of redispatch….
>
> (OATT § 32.3, P. 111 (emphasis added))

Q. How does this OATT provision permit a QF to interconnect in areas with zero ATC in a way that avoids Network Upgrades?

A. PacifiCorp clarified and expanded the redispatch options available to a network transmission customer in a 2014 filing with the FERC that addresses the exact issue now before this Commission and explains how Section 32.3 of the OATT permits a QF to interconnect in areas with zero ATC and avoids the need for Network Upgrades.

On December 24, 2014, PacifiCorp filed for FERC acceptance (**"FERC NOA Filing"**)[6] a proposed amendment (**"NOA Amendment"**) to the NOA between PacTrans and RMP. The FERC NOA Filing sought confirmation that, under the NOA Amendment, PacTrans could, consistent with the Redispatch options contemplated by Section 32.3 of the OATT, "grant additional Designated Network Resource ("DNR") applications on behalf of [RMP] **in order to enable firm delivery from QFs even in the absence of [ATC]**," so long as RMP agreed to operate within identified system limits.[7] The FERC NOA Filing cited a need for additional flexibility for managing RMP's other network resources in order to secure DNR status from PacTrans for QF projects in constrained areas so as to avoid "the construction of uneconomic Network Upgrades."[8]

[6] Relevant portions of the FERC NOA Filing, including an attachment showing in redline the proposed and accepted amendments to the NOA, are attached hereto as Exhibit 1.
[7] FERC NOA Filing at 1 (emphasis added).
[8] *Id*. at 3 (citing difficulties that arise given (1) PacifiCorp's "obligation under PURPA to purchase, and make firm transmission arrangements for, QF power," (2) FERC precedent

Q. Is the redispatch of resources assumed in the QF Model runs for the Glen Canyon Solar QFs consistent with the Redispatch options contemplated in Section 32.3 of the OATT and the NOA Amendment?

A. Yes. The GC Resources were specifically sized to avoid curtailment and Network Upgrades—both to avoid the risk that someone might need to pay for unnecessary upgrades, and because the QF Model would have reflected no or low incremental avoided cost value for energy in excess of the Existing RMP Transmission Rights. As a result, the QF Model effectually applied Operational Redispatch as the means to deliver the GC Resource energy to RMP loads, subject to transmission limitations. RMP need only maintain consistent modeling assumptions and follow existing rules and procedures for interconnecting a large QF by submitting appropriate requests for transmission service studies that include Redispatch options when requesting designation of the GC Resources as DNRs. By dispatching RMP's other DNRs in the manner assumed in the QF model in setting avoided cost prices for the GC Resources, it is likely that the transmission SIS will find that the entire output of the GC Resources can be transmitted by RMP to load without triggering the need for Network Upgrades, the cost of which may well be rolled into transmission rates and be borne by RMP or its customers.

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that could be read to preclude PacifiCorp from granting DNR status to a QF "where there is zero ATC," and (3) "FERC policies that obligate a transmission provider to build transmission to accommodate firm transmission service requests, including new DNR requests, in constrained areas").

Q. What was the stated purpose of the FERC NOA Filing?

A. PacifiCorp's stated purpose in requesting FERC approval of the NOA Amendment was to confirm that RMP could "meet its PURPA must-take obligations by providing firm transmission service to deliver QFs, while at the same time avoiding the need to undertake potentially uneconomic transmission expansions."[9]

In requesting FERC approval of the NOA Amendment, PacifiCorp explained that the amendment was necessary to allow RMP, as the network transmission customer for QF resources, to decline to execute an agreement with PacTrans for Network Upgrades *but still receive a DNR designation* by managing the new DNR (e.g. the GC Resources), along with the rest of its DNRs, within all relevant limitations, which in this instance would be the 95 MW of transmission rights.[10] FERC approved the NOA Amendment in an order dated May 21, 2015 (**"FERC NOA Order"**). In so doing, FERC noted that the NOA Amendment was consistent with PURPA because it "obligate[s] [RMP] to curtail the schedules of [RMP's] non-QFs before the schedules of any QFs during normal operating conditions,"[11] while also allowing PacifiCorp's transmission customers—including RMP—to avoid paying for uneconomic Network Upgrades.[12] In other words, the NOA allows RMP purchase QF energy as a must-take obligation and

[9] *Id*. at 2.
[10] Order Accepting Proposed Network Operating Agreement Amendment. Docket No. ER-15-741-000, ER15-741-001, 151 FERC ¶ 61,170, May 21, 2015, at ¶¶ 5-6. A copy of the FERC NOA Order is attached hereto as Exhibit 2.
[11] *Id.*, ¶ 27.
[12] *Id.*, ¶ 28.

provide firm transmission service for QF energy, while at the same time satisfying PURPA's customer indifference standard.[13]

Q. Does the FERC NOA Filing clarify Section 32.3 of the OATT?

A. Yes. In the FERC NOA Filing, PacifiCorp represented that the requested operational Redispatch option is appropriately characterized as a "form" of the "planning redispatch" contemplated by Section 32.3 of the OATT.[14] It explained that this variant of planning redispatch "involves an individual network customer [RMP] agreeing to operate within certain limits because there is insufficient capacity to accommodate all of the DNRs without limitation."[15]

Q. What other aspects of the FERC NOA Filing should the Commission be aware of?

A. In its FERC NOA Filing, PacifiCorp explained that, while the traditional form of planning redispatch creates additional ATC through altered flows, under the operational variant of Redispatch RMP will operate its network resources within certain operational limits in constrained areas, and is "more akin to replacement or alternate resources."[16] The filing noted that this form of Redispatch is nevertheless properly characterized as a form of "planning redispatch," because "both approaches favor the efficient redispatch of resources

[13] *Id.*, ¶ 28. FERC noted PacifiCorp's assertion that the NOA Amendment would "allow [RMP's] customers to avoid paying for network upgrades when the network upgrades are not justified by economic or reliability needs." *Id.*
[14] FERC NOA Filing at 8. PacifiCorp noted that it "believes it is appropriate to characterize the proposed operational practice as a form of planning redispatch.".
[15] *Id.*
[16] *Id.*

over time-consuming and expensive network upgrades."[17] PacifiCorp also noted that this form of Redispatch remained "within the current OATT construct and study processes."[18]

Q Did FERC approve the NOA Amendment requested by PacifiCorp?

A. Yes. FERC accepted the Amended NOA in the FERC NOA Order, and confirmed that the NOA would "allow [PacifiCorp] to accommodate QF requests in constrained areas without building uneconomic upgrades,"[19] while also limiting the impact on other transmission customers "by requiring [RMP] to operate its portfolio of designated network resources within its network rights and within transmission system limits."[20]

The FERC NOA Order also confirmed that "[FERC] precedent requires electric utilities, such as PacifiCorp, to deliver a QF's power on a firm basis and prohibits the curtailment of QF resources" except under very narrow circumstances not applicable here.[21] It further confirmed that, absent the availability of Redispatch, PacTrans and its transmission customers would be required to pay for Network Upgrades needed to accommodate QF energy.[22]

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[17] *Id.*
[18] *Id.* at 8, footnote 25.
[19] FERC NOA Order, ¶ 7.
[20] *Id.*, ¶ 28.
[21] *Id.*, ¶ 27.
[22] *Id.*, ¶ 28, where FERC noted that PacifiCorp's use of operational Redispatch "would, at the same time, also allow its customers to avoid paying for network upgrades when the network upgrades are not justified by economic or reliability needs."). This is similar to PacifiCorp's acknowledgment in the FERC NOA Filing: "However, where the transmission system is constrained, and constraints cannot be relieved by planning redispatch, the OATT and FERC's transmission pricing policies obligate a transmission

The FERC's approval of the revised NOA gives RMP a tailor-made tool to efficiently and effectively resolve the challenge of delivering QF generation to loads when the QF resources is located in a transmission constrained area.

V. FIRM TRANSMISSION OF THE GC ENERGY SHOULD NOT REQUIRE NETWORK UPGRADES

Q. Does it appear that Network Upgrades will be required in order for RMP to transmit the GC Energy along the transmission path?

A. No. As discussed above, in light of the 95 MW of Existing RMP Transmission Rights identified in RMP's avoided cost model runs for the GC Resources, it does not appear that Network Upgrades should be required for RMP to receive and transmit the GC Energy to load on a firm basis. The fact that the GC Resources exactly match the size of the Existing RMP Transmission Rights is not coincidental. Glen Canyon Solar downsized the GC Recourses in order to match those rights.

Q. As a utility purchasing QF output, what must RMP do to provide firm transmission for the GC Energy?

A. RMP must request DNR designation of the GC Resources. My understanding is that public utilities must purchase QF output on a firm basis, meaning that they cannot curtail QF output except under limited circumstances.[23]

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provider to build network upgrades to accommodate firm transmission service requests **and roll the cost of those network upgrades into rate base.**" FERC NOA Filing at 4 (emphasis added).

[23] These limited circumstances are discussed in Pioneer *Wind Park I, LLC*, 145 FERC ¶ 61,215, at P. 38 (2013) ("*Pioneer Wind Park*") and *Entergy Servs. Inc.*, 137 FERC ¶

Indeed, "[FERC] has specifically held that: (1) the QF's obligation to the purchasing utility is limited to delivering energy to the point of interconnection …; and (2) the QF is not required to obtain transmission service, either for itself or on behalf of the purchasing utility in order to deliver its energy from the point of interconnection with the purchasing utility to the purchasing utility's load."[24]

It is thus my understanding that, as the purchasing utility, RMP is obligated to secure transmission service necessary to deliver a QF's output to load or otherwise manage that output in accordance with PURPA and FERC precedent.[25] Schedule 38 indicates that the OATT will provide the procedures that RMP should follow to designate a large QF as a network resource. As a network customer, RMP has transmission rights that can and should be used in requesting designation of a QF resource as a new DNR.

Q. What are the implications of RMP requesting DNR designation of the GC Resources?

Under Section 32.3 of the OATT, System Impact Study Procedures, a request by RMP for DNR designation of a QF resource triggers a system impact study by PacTrans to identify:

61,199 at PP. 52-58 (2011).

[24] *Pioneer Wind Park,* page 38.

[25] In *Pioneer Wind Park,* at page 38, footnote 73, FERC noted that "PacifiCorp will be the transmission customer, taking delivery of the QF's output at the point of interconnection . . . and with the resulting responsibility to transmit [the QF's] output from the point of interconnection . . . across PacifiCorp's transmission system to PacifiCorp's loads."). Similarly, in the FERC NOA Filing, PacifiCorp admitted that "PURPA obligates a utility to purchase, and make firm transmission arrangements for, a QF's power" (page 4).

(a) Any system constraints, identified with specificity by transmission element or flowgate;

(b) Redispatch options (when requested by an Eligible Customer [RMP]) including, to the extent possible, an estimate of the cost of redispatch;

(c) Available options for installation of automatic devices to curtail service (when requested by an Eligible Customer [RMP]); and

(d) Additional Direct Assignment Facilities or Network Upgrades required to provide the requested service.

For a network customer like RMP, a study of Redispatch options "shall (1) identify all resources located within the Transmission Provider's Control Area that can significantly contribute toward relieving the system constraint and (2) provide a measurement of each resource's impact on the system constraint."[26] If PacTrans has information about whether any resource outside its control area could relieve the constraint, it must also identify those resources in the SIS.[27]

Q. Please summarize how Network Upgrades can be avoided in this matter.

A. Section 32.3 of the OATT authorizes RMP, as a network transmission customer, to request analyses of all available Redispatch options to accommodate a new QF network resource, even in the absence of ATC, to avoid triggering the need for uneconomic Network Upgrades. Moreover, RMP's NOA specifically permits the use of both planning and operational Redispatch options to avoid

[26] *Id.*
[27] *Id.*

uneconomic Network Upgrades. Indeed, the NOA Amendment was specifically targeted at the very circumstances presented by the GC Resources—where lack of ATC might otherwise require uneconomic Network Upgrades to secure DNR designation from PacTrans for a QF resource. These Redispatch options are available precisely to allow RMP to satisfy its PURPA obligations to purchase and deliver QF output on a firm basis while also maintaining customer indifference. In my view, consistent with its rights and obligations under PURPA, the OATT, the NOA and Schedule 38, RMP must request studies of, and then use, its available transmission rights, including Redispatch options, in connection with the Glen Canyon Solar QFs.

Q. What action should RMP take to avoid the risk of unnecessary Network Upgrade Costs?

A. To avoid the risk of unnecessary Network Upgrades and their associated costs, RMP must ask PacTrans to analyze all available Redispatch options in interconnection and transmission studies for the GC Resources, and must then use the available options. It is my understanding that PacTrans has indicated that it will study such options, but only if its transmission customer asks it to do so. In other words, RMP can trigger a transmission study that may conclude that hundreds of millions of dollars in Network Upgrades are required for the GC Energy, simply by not asking PacTrans to study available Redispatch options. Conversely, RMP can ask PacTrans to study available Redispatch options to determine whether exercise of any of those options may avoid expensive Network

Upgrades. In this case, I am confident such a request will result in a determination that no significant Network Upgrades are required in order for RMP to provide firm transmission for the GC Energy from the point of interconnection to RMP's load.

Q. Would RMP's request that PacTrans analyze all available Redispatch options be consistent with the assumptions used in creating avoided-cost pricing for the GC Resources?

A. Yes. The results of the QF Model runs confirm that RMP can utilize GC Energy with its existing network transmission rights. The resource redispatch modeled in GRID exemplifies the very type of Redispatch contemplated in the NOA Amendment. Having assumed redispatch of resources in setting avoided cost prices, RMP should now request consistent studies from PacTrans based on the use of Existing RMP Transmission Rights, including Redispatch.

The same transmission rights and assumptions—including redispatch—used in setting avoided cost prices for the GC Resources should be used consistently in all PacTrans studies and in connection with obtaining DNR status for the GC Resources. They must then be used in real time for RMP to efficiently dispatch resources and realize the modeled savings.

In my view, it is inconsistent with the intent and principles of PURPA to determine avoided cost prices based on resource redispatch and existing transmission rights, but then refuse to utilize Redispatch and those same transmission rights when submitting a TSR. Failure by RMP to ask PacTrans to

study Redispatch options could lead to the purported need for significant Network Upgrades that can be avoided through the simple Redispatch of resources as assumed when RMP calculated avoided cost prices. I can think of no legitimate reason why RMP would not seek such consistency across studies required for a QF resource.

The OATT, the NOA, Schedule 38 and the QF Model all allow satisfaction of RMP's PURPA obligations to QFs and customers through the use of Existing RMP Transmission Rights, including Redispatch, for QF projects. In connection with its TSR for the GC Resources, RMP must request a consistent TSR SIS and interconnection SIS that reflect all available Redispatch options. Failure to do so could result in costly Network Upgrades, the cost of which might be passed back to RMP and its customers.

In its QF Model runs for the GC Resources, RMP identified Redispatch options that would permit it to provide firm transmission along the transmission path, and gave avoided-cost pricing accordingly. RMP should ensure that PacTrans studies those same Redispatch options in connection with its studies to accurately reflect how RMP will transmit the GC Energy to load.

Q. What happens if the transmission customer refuses to utilize or request studies of Redispatch options?

A. In my non-legal view, a transmission customer subject to PURPA must utilize its available resources, including transmission rights and redispatch options, for QFs. Here, I believe the Commission should direct RMP to submit

appropriate TSR requests that request *appropriate* and consistent studies of available Redispatch. The very purpose of the NOA Amendment—to avoid uneconomic Network Upgrades for QFs in areas with limited ATC—would be thwarted by RMP's failure to do so. The Redispatch option represents a pragmatic solution available to RMP that will allow it to carry out its PURPA responsibilities while ensuring prudence on behalf of customers.

The alternative is for RMP to deliberately trigger SIS reports that will likely require avoidable and uneconomic Network Upgrades, with the apparent hope that those costs can be assigned to the GC Resources as Interconnection Costs. In my view, such a result, with its attendant risks, would be highly improper and must be avoided.

Q. Does this conclude your direct testimony?

A. Yes, it does.

EXHIBIT 1

PACIFICORP

Pacific Power |
Rocky Mountain Power
825 NE Multnomah, Suite 1600
Portland, Oregon 97232

December 24, 2014

The Honorable Kimberly D. Bose
Secretary
Federal Energy Regulatory Commission
888 First Street, N.E.
Washington, DC 20426

RE: *PacifiCorp*
Network Operating Agreement Amendment, Docket No. ER15-___-000

Dear Secretary Bose:

Pursuant to Section 205 of the Federal Power Act ("FPA")[1] and Part 35 of the Federal Energy Regulatory Commission's ("FERC" or "Commission") Rules of Practice and Procedure,[2] PacifiCorp hereby submits a proposed amendment to the Network Operating Agreement ("NOA") between PacifiCorp Transmission and PacifiCorp Energy.[3] PacifiCorp respectfully requests an effective date of 60 days after the date of filing, or February 22, 2015.

I. Executive Summary

The instant NOA amendment proposes a narrow, customer-specific operational solution to enable PacifiCorp to continue fulfilling its Public Utility Regulatory Policies Act of 1978 ("PURPA") mandatory purchase obligation and complying with the Commission's open access policies when qualifying facilities ("QF") are constructed in constrained areas of PacifiCorp's transmission system. In particular, the NOA amendment would allow PacifiCorp Transmission to grant additional Designated Network Resource ("DNR") applications on behalf of PacifiCorp Energy in order to enable firm delivery from QFs even in the absence of Available Transfer Capability ("ATC"), provided that PacifiCorp Energy agrees to operate its portfolio of DNRs in the affected area within system reliability limits defined by PacifiCorp Transmission and curtail QF power last, even if that is out of economic merit order. PacifiCorp Transmission could grant such DNRs under two specific circumstances: (1) to provide a

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1 16 U.S.C. § 824d.

2 18 C.F.R. Part 35 (2014).

3 The NOA between PacifiCorp Transmission and PacifiCorp Energy is currently on file with the Commission and designated as PacifiCorp Service Agreement No. 504. *PacifiCorp*, Docket No. ER08-1424, Letter Order, dated Oct. 16, 2008.

longer-term measure until network upgrades are identified pursuant to PacifiCorp's Open Access Transmission Tariff ("OATT"), including the normal OATT Attachment K process; and (2) to provide an interim measure while previously-identified network upgrades are still being constructed.

Importantly, the proposed NOA amendment does not affect the transmission capacity reserved for any other existing PacifiCorp Transmission customer. Indeed, PacifiCorp is not proposing any modifications to its OATT, including, but not limited to, the interconnection process, the transmission service reservation process, or the transmission planning process. Rather, the NOA amendment simply allows PacifiCorp to meet its PURPA must-take obligations by providing firm transmission service to deliver QFs, while at the same time avoiding the need to undertake potentially uneconomic transmission expansions. For all of the foregoing reasons, which are discussed in more detail herein, PacifiCorp believes the proposed amendment is just and reasonable and should be approved.

II. Background

A. FERC-Approved Methodologies for Planning and Reserving Capacity for Network Customers and Determining ATC

PacifiCorp provides transmission service pursuant to its OATT, which contains Commission-approved methodologies for planning and reserving capacity for its network customers and for determining ATC. Nothing proposed herein would change those methodologies. Moreover, the NOA amendment would not diminish the transmission capacity reserved for service to any existing transmission customers. PacifiCorp will continue to plan, reserve transmission capacity, and determine ATC for its network customers, as well as serve firm their designated network loads using their DNRs in accordance with Order No. 888,[4] Order No. 890[5] and PacifiCorp's FERC-approved OATT.[6] This ensures that PacifiCorp reserves capacity equal to, but not in excess of, the

[4] *See Promoting Wholesale Competition Through Open Access Non-discriminatory Transmission Services by Public Utilities; Recovery of Stranded Costs by Public Utilities and Transmitting Utilities*, Order No. 888, 61 Fed. Reg. 21,540 (May 10, 1996), FERC Stats. & Regs. ¶ 31,036 (1996) ("Order No. 888"), *order on reh'g*, Order No. 888-A, 62 Fed. Reg. 12,274 (Mar. 14, 1997), FERC Stats. & Regs. ¶ 31,048 (1997) ("Order No. 888-A"), *order on reh'g*, Order No. 888-B, 81 FERC ¶ 61,248 (1997), *order on reh'g*, Order No. 888-C, 82 FERC ¶ 61,046 (1998), *aff'd in relevant part sub nom. Transmission Access Policy Study Group v. FERC*, 225 F.3d 667 (D.C. Cir. 2000), *aff'd sub nom. New York v. FERC*, 535 U.S. 1 (2002).

[5] *Preventing Undue Discrimination and Preference in Transmission Service*, Order No. 890, FERC Stats. & Regs. ¶ 31,241, *order on reh'g*, Order No. 890-A, FERC Stats. & Regs. ¶ 31,261 (2007), *order on reh'g*, Order No. 890-B, 123 FERC ¶ 61,299 (2008), *order on reh'g*, Order No. 890-C, 126 FERC ¶ 61,228 (2009), *order on clarification*, Order No. 890-D, 129 FERC ¶ 61,126 (2009).

[6] *See, e.g.*, PacifiCorp OATT, Attachment C.

amount necessary to reliably serve network load.[7] PacifiCorp will also continue to identify and plan for necessary transmission system upgrades pursuant to its Order No. 1000-compliant OATT Attachment K process.[8]

The proposed operational protocol is consistent with and does not change any of these FERC-approved methodologies or any other aspect of the PacifiCorp OATT.

B. Implementation of PURPA Must-Take Obligation in Constrained Areas

When QFs site projects in constrained areas, the intersection between the utility's PURPA must-take requirement and the Commission's open access policies requires the utility to navigate:

1. **Firm transmission arrangements for QFs.** FERC regulations and precedent that state a utility has an obligation under PURPA to purchase, and make firm transmission arrangements for, QF power, as well as to keep customers indifferent to such QF purchases.
2. **Limitations on granting DNR status.** FERC precedent that does not appear to support the granting of additional DNRs where there is zero ATC; and
3. **Constructing network upgrades to accommodate new DNRs.** FERC policies that obligate a transmission provider to build transmission to accommodate firm transmission service requests, including new DNR requests, in constrained areas.

As discussed in more detail below, these requirements collectively have the potential to require the construction of uneconomic network upgrades that are needed solely to accommodate the QF power sited in the constrained area, rather than to maintain compliance with reliability requirements (including load service) or to achieve improvements where upgrades are economically justified – traditionally the primary drivers of the open access transmission planning process.[9] In addition, there is a separate but related issue of how to provide firm transmission for the QF during any interim periods when transmission upgrades have been previously identified in accordance with PacifiCorp's OATT and Commission-approved transmission planning process and are in the process of being constructed.

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[7] *See, e.g.*, Order No. 888 at p. 31,754 (addressing whether and how to set limits on the amount of network resources a customer can designate, ultimately limiting it to the resources a customer owns or commits to purchase, and noting that a transmission customer would have "an incentive not to oversubscribe its capacity requirements because the cost of excessive reserve margins will be prohibitive," which would protect the utility from having to incur costs that are out of proportion to the customer's load).

[8] PacifiCorp OATT, Attachment K; *Transmission Planning and Cost Allocation by Transmission Owning and Operating Public Utilities*, Order No. 1000, 76 Fed. Reg. 49,842 (Aug. 11, 2011), FERC Stats. & Regs. ¶ 31,323 (2011), *order on reh'g*, Order No. 1000-A, 139 FERC ¶ 61,132, *order on reh'g*, Order No. 1000-B, 141 FERC ¶ 61,044 (2012).

[9] PacifiCorp recognizes that there are other considerations in the transmission planning process, but believes that reliable load service and economic considerations are the drivers most relevant to the instant proposal.

1. Firm Transmission Arrangements for QFs

PURPA obligates a utility to purchase, and make firm transmission arrangements for, a QF's power,[10] and to keep customers indifferent to such QF purchases.[11] PacifiCorp Energy has historically made these firm transmission arrangements by designating QF power purchase agreements ("PPA") as Network Resources under its Network Integration Transmission Service Agreement ("NITSA") with PacifiCorp Transmission. However, where the transmission system is constrained, and constraints cannot be relieved by planning redispatch, the OATT and FERC's transmission pricing policies obligate a transmission provider to build network upgrades to accommodate firm transmission service requests[12] and roll the cost of those network upgrades into rate base.[13]

2. Limitations on Granting DNR Status

Furthermore, Commission precedent does not appear to support the granting of new DNR requests where there is zero ATC.[14] In *Madison Gas & Electric v. Wisconsin Power & Light Company*, the Commission examined, among other issues, whether the transmission provider had acted inappropriately by granting its own merchant's request to designate a new network resource without first evaluating whether ATC was available to meet the request. The transmission provider defended its actions, arguing that "any network customer may designate network resources without regard to the amount of ATC, and that requests for network service (an initial service request or a change in a network resource for an existing service) cannot be rejected on the ground that there is no ATC."[15]

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[10] *See, e.g.*, 18 C.F.R. § 292.303 (discussing a utility's obligation to interconnect with and purchase power from QFs); *Pioneer Wind Park I, LLC*, 145 FERC ¶ 61,215 at P 38 (2013) ("*Pioneer*") (stating, for example, that the proposed curtailment provision "treats Pioneer Wind as if it is the transmission customer and it curtails Pioneer Wind as if it were a non-firm, secondary network service transmission customer that can be curtailed by PacifiCorp before any existing PacifiCorp Network Resource that was designated as a Network Resource prior to execution of the PPA between Pioneer Wind and PacifiCorp.") (emphasis added). The Commission has also stated that, once QF energy is purchased, it is the utility's responsibility to "deliver that energy to its load (or otherwise manage the energy)." *See, e.g.*, *Entergy*, 137 FERC ¶ 61,199 at P 52 (2011); *Exelon Wind*, 140 FERC ¶ 61,152 at P 50 (2012) (emphasis added). The Commission has not expanded on this statement other than to state what utilities cannot do (*e.g.*, utilities cannot treat QF purchases subordinate to tariff considerations and/or curtail QF output along with non-firm service).

[11] *See, e.g.*, 18 C.F.R. § 292.304 (a)(1)-(2) (stating that rates for QF purchases must "[b]e just and reasonable to the electric consumer of the electric utility and in the public interest; and [n]ot discriminate against qualifying cogeneration and small power production facilities. Nothing in this subpart requires any electric utility to pay more than the avoided costs for purchases.").

[12] *See, e.g.*, OATT Sections 32.3 and 32.4. These sections are discussed in more detail below.

[13] *See, e.g., Inquiry Concerning the Commission's Pricing Policy for Transmission Services Provided by Public Utilities Under the Federal Power Act*, FERC Stats. & Regs. ¶ 31,005 (1994), *clarified*, 71 FERC ¶ 61,195 (1995) (FERC's Transmission Pricing Policy).

[14] *Madison Gas & Elec. Co v. Wisc. Power & Light Co.*, 80 FERC ¶ 61,331 at 62,103-04 (1997).

[15] *Id*. at 62,103-04.

The Commission disagreed, finding that the transmission provider had confused the restrictions placed on network customers in placing requests for network service with the procedures that a transmission provider must use to evaluate its ability to provide the requested service.[16] While a customer does not need to consider ATC when deciding whether to submit a request, the Commission concluded that the determination of ATC is most certainly an element of the transmission provider's evaluation of and response to the request.[17] To that end, the Commission stated:

> When a network service application (initial or proposed modification) is received, the transmission provider must evaluate ATC and determine if it is adequate to meet the request. This analysis would properly consider whether any pending reservations were conditional. If there is adequate ATC (as was the case here once the [MG&E] conditional reservation was canceled), the request should be granted. If there is inadequate ATC, the transmission provider would perform a system study to determine what changes to the transmission grid would be required to provide the requested service. Until sufficient ATC is available to meet the request, the application could not be granted. However, we note that the resource could be used as a substitute resource, accessible to the network customer on an as available basis with a priority above all other nonfirm transmission services.[18]

Thus, a potential conflict between federal obligations arises because, on the one hand, PURPA requires a utility to purchase QF power and make firm transmission arrangements (*e.g.*, DNR status) to deliver it, even if the QF has chosen to site in a constrained area. On the other hand, Commission open access policy and precedent do not appear to support the granting of new DNRs until sufficient ATC is available to meet the request. As discussed in the next section, this appears to put the utility in the position of having to construct network upgrades in order to accommodate the PURPA-required QF firm transmission service, even if the utility would not have otherwise constructed those upgrades – certainly not for load service, reliability or because they were cost-justified.[19]

3. Constructing Network Upgrades to Accommodate New DNRs

If a DNR request is pursued where constraints are present, the OATT essentially provides two options: (1) study whether the constraints can be resolved using planning redispatch; or (2) upgrade the system to relieve the constraints.[20] The OATT does not contemplate an option under which a network customer can decline to execute a Facilities

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16 *Id*.

17 *Id*.

18 *Id* at 62,103-04. (emphasis added).

19 Indeed, simply using the QF resource "as a substitute resource, accessible to the network customer on an as available basis" (*i.e.*, secondary network service) would be inconsistent with FERC precedent that bars utilities from curtailing QFs as if they are non-firm, secondary network service transmission customers. *See Pioneer*, 145 FERC at P 38.

20 OATT Section 32.3 and 32.4.

Study Agreement but still receive a network resource designation and simply manage that new DNR along with the rest of its DNRs within its existing capacity limitations.

To that end, if planning redispatch does not resolve the constraints and the System Impact Study ("SIS") indicates that upgrades are needed to accommodate that transmission service request, OATT Section 32.4 states that PacifiCorp Transmission must tender a Facilities Study Agreement to the customer, and that "For a service request to remain a Completed Application, the Eligible Customer shall execute the Facilities Study Agreement and return it…within fifteen (15) days. If the Eligible Customer elects not to execute the Facilities Study Agreement, its Application shall be deemed withdrawn and its deposit shall be returned with interest."[21]

Building significant network upgrades that are solely to accommodate QFs and not otherwise necessary for load service or reliability nor cost-justified would seem to conflict with the PURPA customer indifference mandate, as well as run counter to FERC long-term transmission planning policies noted above. The following section describes the proposed NOA amendment, which is designed to address this conflict.

III. Proposed NOA Amendment

A number of QF resources have indicated a desire to interconnect with PacifiCorp in areas where the transmission system is constrained or has the potential to become constrained. The NOA amendment proposes a narrow, customer-specific operational solution to apply in such areas,[22] while still allowing PacifiCorp to fulfill its PURPA mandatory purchase obligation and comply with open access policies.

In particular, the new NOA provision would give PacifiCorp Transmission the right to grant additional DNR applications (QF and non-QF) in constrained areas without the construction of uneconomic network upgrades or during the interim period while approved upgrades are developed, provided that PacifiCorp Energy (as the network customer) agrees to operate its DNRs within its network rights under its NITSA and system limits defined by PacifiCorp Transmission and curtail QF power last, even if that is out of economic merit order. These proposed provisions have been developed within the construct of existing OATT study processes and concepts, *i.e.*, the existing OATT planning redispatch option.

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[21] OATT Section 32.4 (emphasis added).

[22] Transmission providers and transmission customers have flexibility with respect to the terms and conditions they decide to include in their NOA. To that end, FERC recognized in Order No. 888-A that the NOA "is expected to be a highly detailed agreement between the transmission provider and network customer that establishes the integration of the network customer within the transmission provider's transmission system. Due to the unique characteristics of network customers' systems and the level of customer-specific information and arrangements required under a network operating agreement, it is likely that each network operating agreement will be different for each customer. Accordingly, the Commission does not believe it appropriate to mandate a particular form of network operating agreement for inclusion in the *pro forma* tariff." Order No. 888-A at 30,325.

The amendment language begins by stating that where an SIS indicates that (1) upgrades are needed to relieve system constraints and accommodate PacifiCorp Energy's request to designate a new Network Resource, and (2) the delivery of QF power has caused or contributed to those system constraints, then PacifiCorp Energy can choose from two standard OATT options: (1) planning redispatch or (2) a facilities study and construction of upgrades. The proposed NOA amendment falls under the planning redispatch option.

To that end, the new NOA provision would provide PacifiCorp Transmission the ability to grant additional DNRs even where there is zero ATC available, and provide PacifiCorp Energy the option to manage its DNRs within existing transmission system limits, under two different circumstances: (1) as an interim measure while network upgrades are being constructed; and (2) as a longer-term measure where no upgrades will be constructed for purposes of accommodating the QF request(s), but may later be identified as necessary by PacifiCorp Transmission pursuant to its OATT, including in the normal Attachment K process. More specifically:

- **Section 8.1(a) - Interim planning redispatch while facilities are being constructed.** Section 8.1(a) of the NOA amendment addresses circumstances where network upgrades were previously identified as necessary pursuant to the OATT, including the Attachment K planning process, and are currently being pursued. In order to remain fully consistent with the existing OATT construct, that same section also gives PacifiCorp Energy the option to enter into a Facilities Study Agreement if the necessary upgrades have not been previously identified, and PacifiCorp Energy would like those upgrades studied and constructed. In either case, this section contemplates upgrades being constructed, and addresses the treatment of new requests and resource management in the interim.

- **Section 8.1(b) - Longer-term planning redispatch.** Section 8.1(b) addresses circumstances where network upgrades have not been previously identified pursuant to the OATT, including the Attachment K planning process, and the treatment of new requests and resource management where there is no current plan to construct upgrades.

Importantly, in either case – whether an interim or longer-term plan – the amendment would allow PacifiCorp Transmission to grant DNR applications even if there is zero ATC, so long as PacifiCorp Energy agrees to operate within identified system limits unless and until upgrades are built and constraints are relieved. Also, under either option 8.1(a) or 8.1(b), PacifiCorp will prioritize its scheduled dispatch of its DNRs in the constrained area so that schedules of non-QF resources will be limited before any QF PPA schedules as necessary to maintain identified transmission limits. This provision ensures that QFs will remain protected and PacifiCorp will remain in

compliance with its PURPA obligations to purchase and make firm delivery arrangements for QF power.[23]

Other network customers will also remain protected under the proposed protocol, as it will only address PacifiCorp Energy's network service. Indeed, PacifiCorp will continue to comply with all of the FERC-approved methodologies for planning and reserving capacity for network customers and determining ATC noted above. Importantly, the proposal will not affect any other network customer's network allocation, and all network loads will continue to be served on a firm basis. Only PacifiCorp Energy's DNRs will be subject to the proposed operating protocol, unless another network customer requests similar treatment.

PacifiCorp believes it is appropriate to characterize the proposed operational practice as a form of planning redispatch. Traditional planning redispatch contemplates a transmission provider studying whether existing resources could be delivered firm in a different manner, *i.e.*, through a redispatch that alters flows and creates additional ATC for a new service request to also be delivered on a firm basis.[24] The proposed NOA amendment involves an individual network customer (PacifiCorp Energy) agreeing to operate within certain limits because there is insufficient capacity to accommodate all of the DNRs without limitation. Thus, the DNRs in that constrained area would be more akin to replacement or alternate resources, rather than resources that can be delivered firm through a redispatch that alters flows and creates additional ATC. However, both approaches favor the efficient redispatch of resources over time-consuming and expensive network upgrades, and for that reason, PacifiCorp believes it would be appropriate to characterize its proposed resource management as a form of planning redispatch.[25]

Finally, the proposed NOA amendment includes provisions that: (1) address certain considerations that can be taken into account for the prioritizing of non-QF DNRs; and (2) clarify that the NOA planning redispatch procedures will apply during normal operating conditions, not system emergency conditions. With regard to the first, the NOA amendment notes that PacifiCorp Energy can take additional contractual obligations into account in prioritizing the planning redispatch of its non-PURPA DNRs. This language is intended to address PacifiCorp Energy's ability to consider, for example,

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[23] As noted above, the Commission has also stated that once QF energy is purchased, it is the utility's responsibility to "deliver that energy to its load (or otherwise manage the energy)." *See, e.g.*, *Entergy*, 137 FERC ¶ 61,199 at P 52 (2011); *Exelon Wind*, 140 FERC ¶ 61,152 at P 50 (2012) (emphasis added). While the Commission has not expanded on this statement other than to state what utilities cannot do (*e.g.*, utilities cannot treat QF purchases subordinate to tariff considerations and/or curtail QF output along with non-firm service), PacifiCorp believes that its proposed NOA amendment is consistent with this statement.

[24] *See, e.g.*, Order No. 890 at P 901 ("Planning redispatch is a product that Order No. 888 required transmission providers to use, in certain circumstances, to create additional transmission capacity to accommodate a request for firm transmission service.").

[25] Doing so also offers the benefit of keeping the proposal within the current OATT construct and study processes.

contractual liquidated damages provisions, when making decisions about the priority of non-QF DNRs.

With regard to the second, the NOA amendment makes it clear that the new planning redispatch procedures are different than the Reliability Redispatch Procedures discussed in Section 8.2 of the NOA, or the system emergency operations discussed in Section 307 of FERC's PURPA regulations.[26] In other words, the operations described in the NOA amendment apply during *normal* operating conditions. System emergency conditions have separate and distinct rules, including the right to curtail QF power on a nondiscriminatory basis to the extent it is contributing to the emergency – something not contemplated or addressed by this NOA amendment.[27]

IV. Communications

All communications and correspondence regarding this filing should be forwarded to the following persons:

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V. Effective Date

Consistent with 18 C.F.R. § 35.3(a)(1), PacifiCorp respectfully requests an effective date of 60 days after date of filing.

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[26] 18 C.F.R. § 292.307.

[27] Nothing in this filing or the proposed NOA amendment modifies the ability of PacifiCorp Transmission to curtail the output of a QF, in accordance with the interconnection agreement and the Commission's regulations applicable in a system emergency. The Commission's regulations define "system emergency" as "a condition on a utility's system which is likely to result in imminent significant disruption of service to customers or is imminently likely to endanger life or property." 18 C.F.R. § 292.101(b)(4). In this limited emergency situation, PacifiCorp would have the right to discontinue purchases from QFs if such purchases would contribute to the system emergency. 18 C.F.R. § 292.307.

VI. Documents Submitted with this Filing; Request for Waiver

PacifiCorp is submitting the NOA amendment changes in eTariff format in accordance with the requirements of Order No. 714.[28] In addition to this transmittal letter, PacifiCorp is submitting a clean copy of the amended NOA (Exhibit A) and a redline copy of the amended NOA (Exhibit B).

To the extent necessary, PacifiCorp also respectfully requests waiver of any of the requirements in Part 35 of the Commission's regulations which have not been fulfilled by this filing.

VII. Conclusion

For the foregoing reasons, PacifiCorp respectfully requests that the Commission accept the proposed NOA amendment.

Respectfully Submitted,

/s/ Karen J. Kruse
Karen J. Kruse

Attorney for PacifiCorp

[28] *Electronic Tariff Filings*, Order No. 714, 124 FERC ¶ 61,270 (2008).

EXHIBIT 2

151 FERC ¶ 61,170
UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

Before Commissioners: Norman C. Bay, Chairman;
Philip D. Moeller, Cheryl A. LaFleur,
Tony Clark, and Colette D. Honorable.

PacifiCorp Docket Nos. ER15-741-000
ER15-741-001

ORDER ACCEPTING PROPOSED NETWORK OPERATING AGREEMENT AMENDMENT

(Issued May 21, 2015)

1. In this order, we accept PacifiCorp's proposed amendment to the Network Operating Agreement (Network Operating Agreement) between PacifiCorp and its merchant function, PacifiCorp Energy, to be effective February 22, 2015, as requested.

I. Background

2. On December 24, 2014, PacifiCorp filed the proposed amendment to the Network Operating Agreement pursuant to section 205 of the Federal Power Act (FPA).[1] PacifiCorp states that there is a potential conflict between the Commission's policies regarding the designation of network resources and the obligations imposed by the Public Utility Regulatory Policies Act (PURPA)[2] regarding qualifying facility (QF) power.[3] PacifiCorp notes that the Commission's precedent in *Madison Gas & Electric Company v. Wisconsin Power & Light Company*[4] does not appear to allow a transmission provider to grant new designated network resource requests unless there is sufficient available transfer capability (ATC) to meet that request.[5] In *Madison*, the Commission also noted

[1] 16 U.S.C. § 824d (2012).

[2] 16 U.S.C. § 824a-3 (2012).

[3] PacifiCorp December 24 Filing at 5.

[4] *Madison Gas & Elec. Co v. Wisc. Power & Light Co*., 80 FERC ¶ 61,331 (1997) (*Madison*).

[5] PacifiCorp December 24 Filing at 4 (citing *Madison*, 80 FERC at 62,103-04).

that a resource could be designated as a substitute "as-available" resource with priority above all non-firm transmission if there is no ATC.[6]

3. PacifiCorp further explains that PURPA requires a utility to purchase, and make firm transmission arrangements for, a QF's power, and to keep customers indifferent to such QF purchases.[7] PacifiCorp states that PacifiCorp Energy has historically made these firm transmission arrangements by designating QF power purchase agreements as network resources. PacifiCorp asserts that, when the transmission system is constrained, and constraints cannot be relieved by using planning redispatch, it is required to construct network upgrades to accommodate firm transmission service requests.

4. PacifiCorp states that this appears to put it in the position of having to construct network upgrades that are not justified by economic or reliability reasons.[8] Specifically, PacifiCorp explains that, because PURPA requires a utility to purchase QF power and make firm transmission arrangements to deliver it even if the QF has chosen to site in a constrained area, but Commission precedent does not allow the designation of a new network resource until sufficient ATC is available, a utility is in the position of having to construct network upgrades to accommodate the PURPA-required QF firm transmission service, even if the utility would not have otherwise constructed those upgrades for economic or reliability reasons.

5. PacifiCorp argues that building these upgrades that are solely to accommodate QFs, and not otherwise cost-justified or necessary for load service or reliability, could run contrary to the Commission's long-term planning policies and to the mandate that customers should be kept indifferent to QF purchases (i.e. they pay no more than the avoided cost).[9]

II. PacifiCorp Filing

6. PacifiCorp asserts that the proposed amendment to the Network Operating Agreement is designed to address this conflict. The proposed amendment would allow PacifiCorp to grant additional designated network resource applications on behalf of PacifiCorp Energy in order to enable firm delivery from QFs even if there is no ATC, provided that PacifiCorp Energy agrees to operate its portfolio of designated network

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[6] *Madison*, 80 FERC at 62,103-04.

[7] PacifiCorp December 24 Filing at 4.

[8] *Id.* at 5.

[9] *Id.* at 6.

resources in the affected area within system reliability limits and curtail QF power last, even if that is out of economic merit order.[10] PacifiCorp's proposed amendment would allow the designation of network resources in two circumstances: (1) as an interim measure while previously-identified network upgrades are being constructed; and (2) as a longer-term measure where no upgrades will be constructed for purposes of accommodating the QF request(s). PacifiCorp states that the proposed amendment provisions have been developed within the construct of the existing Open Access Transmission Tariff (OATT) planning redispatch option.[11]

7. PacifiCorp believes that it is appropriate to characterize the proposed operational practice as a form of planning redispatch.[12] PacifiCorp states that the practice under its proposed amendment is distinguished from current OATT processes because, while traditional planning redispatch contemplates delivering designated resources in a different manner, the proposed Network Operating Agreement amendment involves a network customer (in this case, PacifiCorp Energy) agreeing to operate its network resources within certain limits because there is insufficient capacity to accommodate all of the designated network resources without limitation.[13] PacifiCorp argues that this amendment will allow it to accommodate QF requests in constrained areas without building uneconomic upgrades.[14]

8. PacifiCorp asserts that other network customers will remain protected under the proposed protocol because it will only address PacifiCorp Energy's network service. PacifiCorp maintains that the proposal will not affect any other network customer's network allocation, and that all network loads will continue to be served on a firm basis. PacifiCorp states that only PacifiCorp Energy's designated network resources will be subject to the proposed operating protocol, unless another network customer requests similar treatment.[15]

9. PacifiCorp states that the proposed Network Operating Agreement amendment includes provisions that: (1) address certain considerations that can be taken into account

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[10] *Id.* at 1.

[11] *Id.* at 6.

[12] *Id.* at 8.

[13] *Id.*

[14] *Id.* at 2.

[15] *Id.* at 8.

for the prioritizing of non-QF designated network resources; and (2) clarify that the Network Operating Agreement planning redispatch procedures will apply during normal operating conditions, not system emergency conditions. PacifiCorp states that, with regard to the first, the proposed Network Operating Agreement amendment notes that PacifiCorp Energy can take additional contractual obligations into account in prioritizing the planning redispatch of its non-PURPA designated network resources. PacifiCorp states that, with regard to the second, the proposed Network Operating Agreement amendment makes it clear that the new planning redispatch procedures are different than the Reliability Redispatch Procedures discussed in Section 8.2 of the Network Operating Agreement, or the system emergency operations discussed in section 307 of the Commission's PURPA regulations.[16]

III. Notice of Filing and Responsive Pleadings

10. Notice of PacifiCorp's December 24, 2014 filing was published in the *Federal Register*, 80 Fed. Reg. 217 (2015), with interventions and protests due on or before January 14, 2015. None was filed.

11. On February 20, 2015, the Commission staff issued a letter notifying PacifiCorp that its filing was deficient. On March 23, 2015, PacifiCorp submitted a filing in response to the February 20, 2015 deficiency letter. Notice of PacifiCorp's March 23, 2015 filing was published in the *Federal Register*, 80 Fed. Reg. 16,669 (2015), with interventions and protests due on or before April 13, 2015. Utah Associated Municipal Power Systems (UAMPS) filed a timely motion to intervene and protest. On April 28, 2015, PacifiCorp filed a motion for leave to answer and answer to the UAMPS protest.

A. Deficiency Letter and Response

12. The deficiency letter asked four questions. First, PacifiCorp was asked to identify the transmission paths on which PacifiCorp Energy's schedules will not exceed the transmission limits prescribed by PacifiCorp and how the limits would be prescribed. In response, PacifiCorp states that its amendment is not limited to a particular line or area of PacifiCorp's system; rather, the amended Network Operating Agreement would apply in any area of PacifiCorp's system where QFs have caused or contributed to transmission constraints that limit PacifiCorp's ability to fully accommodate designated network resource requests. PacifiCorp explains that transmission limits would be prescribed in accordance with PacifiCorp's OATT Attachment C, which sets forth PacifiCorp's ATC methodology.[17]

[16] *Id.* at 8-9.

[17] PacifiCorp March 23 Filing at 3.

13. Second, PacifiCorp was asked to provide the amount of must-take QF power that PacifiCorp is currently contractually obligated to deliver, the amount of pending QF interconnection requests, and the transmission paths associated with this generation. In response, PacifiCorp identified the amount of QF generation in each state. With regard to specific transmission path information, PacifiCorp states that the amendment proposal is not limited to a particular line or area of PacifiCorp's system, but notes that in Utah there is a current need to implement the amendment because there has been an influx of QF requests and there is limited ATC.[18]

14. Third, PacifiCorp was asked to explain its statement that only PacifiCorp Energy would be subject to the proposed operating protocol, unless another network customer requests similar treatment, and asked how honoring such other customer requests would comply with the Commission's regulations. In response, PacifiCorp states that offering this treatment to other network customers is consistent with the Commission's open access policies. PacifiCorp explains that, if another customer requested a similar amendment to its network operating agreement, PacifiCorp would file a request for approval of the amendment pursuant to section 205 of the FPA, just as it has done with the proposed amendment in this case.[19]

15. Fourth, PacifiCorp was asked to clarify the long term solution to the constraints that PacifiCorp believes the proposed amendment addresses. In response, PacifiCorp states that it does not envision its proposal as an interim measure. PacifiCorp asserts that the first option of the proposed Network Operating Agreement amendment is an interim measure to be used until upgrades that have already been identified are constructed, but that the second option is intended to have an indefinite timeline. PacifiCorp explains that, in either case, requests for designation of network resources could be granted immediately, despite the fact that network upgrades have not yet been completed or identified pursuant to the OATT.[20]

B. Protest

16. UAMPS states that it is an interlocal association and a political subdivision of the State of Utah that provides power pooling, scheduling, resource management, and other electric services to its members, consisting of 44 municipal and other public power systems in eight western states.[21] UAMPS explains that it is a PacifiCorp transmission

[18] *Id.* at 4.

[19] *Id.* at 5.

[20] *Id.* at 6.

[21] UAMPS Protest at 2.

customer. UAMPS argues that PacifiCorp's proposed amendment to the Network Operating Agreement should be rejected, or at the least suspended and set for hearing.[22]

17. UAMPS argues that, if any other network customer can request a similar amendment to its network operating agreement, then the amendment should be proposed in PacifiCorp's generally applicable OATT.[23] UAMPS asserts that neither Order No. 888[24] nor PacifiCorp's OATT appears to qualify PacifiCorp's obligation to construct additional capacity when a request for network service requires such construction (and redispatch cannot create sufficient ATC to accommodate the request) on PacifiCorp's unilateral determination that the additions are cost-justified.[25]

18. UAMPS questions PacifiCorp's assertion that the proposed amendment will not impair transmission service for existing customers. UAMPS notes that, under the amendment, PacifiCorp Energy must curtail other resources if necessary to accommodate its PURPA deliveries without violating system reliability limits. UAMPS asserts that this will alter the amount of generation input on the transmission system for multiple generators, which will alter flows on the system and potentially create new constraints and affect other customers' transmission service use in real time operations.[26]

19. UAMPS argues that PacifiCorp has not committed to make any adjustments to its planning models in light of the proposed amendment, which makes it possible that a new designated network resource could be denied while a PacifiCorp QF designated network

[22] *Id.* at 11.

[23] *Id.* at 3.

[24] *Promoting Wholesale Competition Through Open Access Non-Discriminatory Transmission Services by Public Utilities; Recovery of Stranded Costs by Public Utilities and Transmitting Utilities*, Order No. 888, FERC Stats. & Regs. ¶ 31,036 (1996), *order on reh'g*, Order No. 888-A, FERC Stats. & Regs. ¶ 31,048, *order on reh'g*, Order No. 888-B, 81 FERC ¶ 61,248 (1997), *order on reh'g*, Order No. 888-C, 82 FERC ¶ 61,046 (1998), *aff'd in relevant part sub nom. Transmission Access Policy Study Group v. FERC*, 225 F.3d 667 (D.C. Cir. 2000), *aff'd sub nom. New York v. FERC*, 535 U.S. 1 (2002).

[25] UAMPS Protest at 4.

[26] *Id.* at 4-5.

resource would be granted. UAMPS asserts that this could have a chilling effect on the addition of new designated network resources in the PacifiCorp footprint.[27]

20. UAMPS also contends that the proposed amendment should not be accepted without more complete cost justification. UAMPS states that there is no data in PacifiCorp's filing comparing the potential costs of PacifiCorp's proposed redispatch practice under the amendment to the costs of construction of additional facilities to accommodate the desires of PacifiCorp's merchant function.[28]

C. PacifiCorp Answer

21. PacifiCorp argues that the proposed customer-specific Network Operating Agreement is the appropriate place for the proposed language, not the generally applicable OATT. PacifiCorp asserts that PacifiCorp Energy is the only customer whose PURPA mandatory purchase obligation is likely to trigger the need for unnecessary upgrades and notes that, if UAMPS or any other network customer believes it has particular operational needs that would justify a similar redispatch protocol, PacifiCorp would welcome a discussion regarding incorporating a similar amendment to that customer's network operating agreement.[29]

22. PacifiCorp asserts that economic considerations are one of the primary factors to be considered in transmission planning.[30] PacifiCorp argues that UAMPS does not understand the circumstances under which PacifiCorp will not construct a network upgrade under the proposed amendment. PacifiCorp states that it is not upon PacifiCorp's unilateral determination that an upgrade is or is not cost justified; rather, it is when a QF chooses to site its project in a constrained area and the transmission studies performed in accordance with the OATT process demonstrate that there is insufficient ATC to accommodate the request.[31]

23. In response to UAMPS' concerns that PacifiCorp's curtailment practices pursuant to the proposed amendment could affect other customers' transmission service, PacifiCorp asserts that the proposal will not affect any other network customer's network

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[27] *Id.* at 5-6.

[28] *Id.* at 7.

[29] PacifiCorp Answer at 3-4.

[30] *Id.* at 4-5.

[31] *Id.* at 6.

allocation, all network loads will continue to be served on a firm basis, and the physical transmission entitlements of other transmission customers will be preserved.[32]

24. PacifiCorp states that it did not provide a comparison of the costs of PacifiCorp's proposed redispatch to the costs of construction of additional facilities because no such comparison can be made with certainty at this time. PacifiCorp explains that it does not know exactly whether, when, and where the Network Operating Agreement amendment protocol will be used, as that depends almost exclusively on where QFs choose to site their projects, whether those projects remain viable and eventually come online, and whether allowing the QF power to flow in a particular constrained area will indeed require other resources to be backed down. With regard to the potential cost of construction of network upgrades, PacifiCorp contends that this amount also necessarily depends on the same QF-driven factors and the specific additional facilities necessary to accommodate those QF requests.[33]

IV. Discussion

A. Procedural Matters

25. Pursuant to Rule 214 of the Commission's Rules of Practice and Procedure, 18 C.F.R. § 385.214 (2014), the timely, unopposed motion to intervene serves to make UAMPS a party to this proceeding.

26. Rule 213(a)(2) of the Commission's Rule of Practice and Procedure, 18 C.F.R. § 385.213(a)(2) (2014), prohibits an answer to a protest unless otherwise ordered by the decisional authority. We will accept PacifiCorp's answer because it has provided information that assisted us in our decision-making process.

B. Substantive Matters

27. We will accept PacifiCorp's proposed amendment to the Network Operating Agreement, to be effective February 22, 2015, as requested. We find that PacifiCorp's proposed amendment is consistent with PURPA. As PacifiCorp acknowledges, Commission precedent requires electric utilities, such as PacifiCorp, to deliver a QF's power on a firm basis and prohibits the curtailment of QF resources except under two very narrow circumstances: (1) system emergencies; and (2) extreme light loading

[32] *Id.* at 8-9.

[33] *Id.* at 11-12.

conditions.[34] PacifiCorp's proposed amendment complies with these requirements because it would obligate PacifiCorp Energy to curtail the schedules of non-QFs before the schedules of any QFs during normal operating conditions.[35]

28. PacifiCorp's proposed amendment would, at the same time, also allow its customers to avoid paying for network upgrades when the network upgrades are not justified by economic or reliability needs. In addition, PacifiCorp appropriately proposes to limit the impact of the additional designation of network resources on the generation of other network customers by requiring PacifiCorp Energy to operate its portfolio of designated network resources within its network rights and within transmission system limits.[36] Moreover, PacifiCorp represents that the proposed amendment does not affect the transmission capacity reserved for any other existing PacifiCorp transmission customer or any other network customer's network allocation, and that all network loads will continue to be served on a firm basis.[37] While the proposed amendment departs from the *Madison* precedent that new designated network resource requests cannot be granted unless there is sufficient ATC, we believe that this departure is justified under the specific circumstances here, given PacifiCorp's commitments that the proposed amendment will not affect the transmission service received by other customers and PacifiCorp Energy's obligation to operate its entire portfolio of designated network resources within its existing network rights.

29. We are not persuaded by UAMPS' arguments that the proposed amendment to the Network Operating Agreement should be rejected or set for trial-type, evidentiary hearing. PacifiCorp Energy commits to operating its network resources within its existing transmission rights. Therefore, the additional designation of network resources

[34] *See* PacifiCorp Answer at 7-8 (citing *Pioneer Wind Park I, LLC*, 145 FERC ¶ 61,215, at P 38 (2013) ("The Commission has specifically held that…the purchasing utility cannot curtail the QF's energy as if the QF were taking non-firm transmission service on the purchasing utility's system"); 18 C.F.R. § 292.307(b) ("During any system emergency, an electric utility may discontinue: (1) Purchases from a qualifying facility if such purchases would contribute to such emergency"); 18 C.F.R. § 292.304(f); *Entergy Servs., Inc.*, 137 FERC ¶ 61,199, at P 55 (2011) ("In Order No. 69, which implemented section [292.]304(f), the Commission stated that that section was intended to deal with a certain condition which can occur during light loading periods…Section [292.]304(f)…applies only to such low loading scenarios")).

[35] *See* PacifiCorp December 24 Filing at 9; PacifiCorp Answer at 7-8.

[36] *See* PacifiCorp December 24 Filing at 6.

[37] *Id.* at 2, 8.

pursuant to the proposed amendment should not impact ATC or impair the transmission rights of other customers. To the extent generation will be curtailed to accommodate these additional network resources, it will be the generation of PacifiCorp Energy, not the generation of any third party, that will be curtailed. We also disagree with UAMPS that the proposed amendment must be included in PacifiCorp's OATT. PacifiCorp has made it clear that any network customer requesting similar terms would be accommodated through an amendment to its network operating agreement. Finally, we disagree with UAMPS that PacifiCorp's proposal must be supported with a more complete cost justification. Any showing in this regard would be hypothetical, speculative, and not necessary to show that this proposal is just and reasonable.

The Commission orders:

PacifiCorp's proposed Network Operating Agreement amendment is hereby accepted, effective February 22, 2015, as requested, as discussed in the body of this order.

By the Commission.

(S E A L)

Kimberly D. Bose,
Secretary.