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September 13, 2019

VIA ELECTRONIC FILING

Attention: Filing Center
Public Utility Commission of Oregon
201 High Street SE, Suite 100
P.O. Box 1088
Salem, Oregon 97308-1088

Re: Docket UM 1930 – In the Matter of PUBLIC UTILITY COMMISSION OF OREGON, Community Solar Program Implementation.

Attention Filing Center:

Attached for filing in the above-captioned docket is an electronic copy of the Joint Utilities' Reply Comments.

Please contact this office with any questions.

Sincerely,

Wendy McIndoo
Office Manager

Attachment

BEFORE THE PUBLIC UTILITY COMMISSION

OF OREGON

UM 1930

In the Matter of: PUBLIC UTILITY COMMISSION OF OREGON, Community Solar Program Implementation.	**JOINT UTILITIES' REPLY COMMENTS**

I. INTRODUCTION

In accordance with the revised schedule provided by Staff on September 5, 2019, PacifiCorp, d/b/a Pacific Power (PacifiCorp), Portland General Electric Company (PGE), and Idaho Power Company (Idaho Power) (collectively, the Joint Utilities) submit these comments to the Public Utility Commission of Oregon (Commission) addressing issues raised at the Community Solar Program (CSP) interconnection workshops held on July 31, 2019, and August 26, 2019, and in written comments submitted by stakeholders.

The Joint Utilities appreciate the robust stakeholder participation in Staff's workshops and Staff's efforts to constructively guide the discussions. Although the process has been expedited to accommodate the CSP launch window, the Joint Utilities appreciate the opportunity to file these comments.

As Staff considers its final recommendation to the Commission, it is important to recall that the purpose of adopting a streamlined interconnection process for CSP projects is to relieve perceived barriers to CSP project interconnection. Those perceived barriers, however, are not necessarily as high as Staff suggested in its June 19, 2019, draft proposal. Indeed, Idaho Power

has a 3 MW interconnection customer with a completed Facility Study that identifies the minimum interconnection costs and no network upgrades. This project has indicated that it wants to participate in the CSP. PGE too has one small CSP project that has been offered an interconnection agreement with minimum interconnection costs and several pre-applications for large CSP projects seeking to interconnect that are not expected to incur substantial interconnection costs. And PacifiCorp has one approximately 2 MW project that has declared itself a CSP project and executed an interconnection agreement.

Although the Joint Utilities disagree that the barriers to interconnection under the current framework are insurmountable, they acknowledge that steps can be taken to streamline the interconnection process to aid the successful launch of the CSP. To that end, the Joint Utilities continue to recommend adoption of their CSP Interconnection Proposals, submitted on August 16, 2019 (Joint Utilities' Proposal).

The Joint Utilities' Proposal addresses the two primary interconnection barriers: (1) the potential for large, deliverability-related network upgrade costs; and (2) the impact of the requirement to study community solar interconnection requests in serial queue order and to consider that all previous interconnection requests are in service, including those on the transmission system. The Joint Utilities' Proposal minimizes costs by encouraging efficient sizing and siting decisions—rather than simply allowing CSP projects to shift the costs of inefficient siting and sizing decisions to utility customers. Thus, the Joint Utilities' Proposal seeks to comply with the CSP statute and ensure that utility customers are protected, while also providing a path to affordably interconnect CSP projects.

Moreover, the Joint Utilities' preliminary analysis indicates that there are many distribution feeders that can potentially accommodate CSP project interconnections under the Joint Utilities'

Proposal. Therefore, the Joint Utilities have every indication that the adoption of their proposal will address CSP interconnection concerns and contribute to a successful implementation of the program. Importantly, the Joint Utilities' Proposal can be easily implemented within the near-term CSP launch window and can have an immediate impact on current and potential CSP interconnection customers.

The only other interconnection proposal that could theoretically be implemented in the near-term is Staff's original proposal to allow CSP projects to interconnect using energy resource interconnection service (ERIS) and to require retail customers to pay for any network upgrades (whether related to deliverability or not) necessary to interconnect the CSP project. The Joint Utilities continue to strongly oppose Staff's original proposal and recommend adoption of the Joint Utilities' Proposal. For the reasons discussed in the Joint Utilities' July 24, 2019, comments, Staff's original proposal has the potential to shift significant costs to non-participating customers, in contravention of the CSP statute and the Public Utility Regulatory Policies Act (PURPA). Moreover, unlike the Joint Utilities' approach, Staff's original proposal addresses neither the delayed CSP project timelines that result when upgrades are required for either interconnection or transmission service nor the issues inherent in the serial nature of interconnection studies. And, finally, Staff's original proposal largely eliminates incentives for CSP projects to choose efficient and cost-effective sites.

II. DISCUSSION

A. The Joint Utilities' Proposal provides the most effective interconnection process for CSP projects.

The Joint Utilities' Proposal remains the best option for streamlining CSP interconnections while also encouraging efficient and cost-effective siting, thereby minimizing the risk that deliverability-related interconnection costs will be shifted to retail customers. Under the Joint

Utilities' Proposal, because the state has deemed the CSP projects to be under a net metering-type structure,[1] eligible CSP interconnection requests would be processed and studied separately from the traditional serial queue, similar to other net metering interconnection requests. The streamlined interconnection study would: (1) consider a limited universe of electrically relevant projects and (2) limit the scope of the interconnection study to an evaluation that is comparable to the Federal Energy Regulatory Commission ERIS product. A CSP project is eligible for this streamlined process if the proposed project, together with all other interconnected and requested generation in the local area, is:

- for PacifiCorp and PGE, less than 25 percent of peak load on the applicable distribution feeder; or
- for Idaho Power, less than 50 percent of the associated minimum load on the applicable distribution feeder.

The eligibility requirements are designed to reduce the likelihood that transmitting the project's power will require the construction of deliverability-related network upgrades when the utility later studies the requirements for acquiring transmission service for the CSP generator. Specifically, the eligibility requirements reduce the likelihood of deliverability-related network upgrades because the Joint Utilities estimate that the output of a CSP generator that meets the eligibility requirements will be unlikely to flow onto the transmission system—similar to a traditional net metering project that is designed to be absorbed by local load. Thus, the Joint Utilities' Proposal seeks to reduce or eliminate deliverability-related network upgrade costs rather than automatically shifting such costs to customers as would occur under Staff's ERIS proposal. Also, unlike Staff's proposal, the Joint Utilities' proposal allows the projects to be studied outside the serial queue because of the net metering-type structure and the eligibility requirements.

[1] The community solar and net metering programs differ in many ways. They have different underlying statutes, different size thresholds (net metering projects may be up to 2 MW), different interconnection requirements, and different billing methodologies, to name a few.

1. Preliminary analysis demonstrates that there are a significant number of feeders that can accommodate CSP interconnections using the Joint Utilities' eligibility criteria.

At the August 26, 2019, workshop, stakeholders expressed concern that the Joint Utilities' Proposal would prove too restrictive and limit the opportunity for CSP project interconnections across each utility's system. However, each utility has undertaken a preliminary review of the distribution feeder data that the utilities publicly posted recently, and each has identified a substantial number of feeders that can potentially accommodate CSP projects using the eligibility thresholds included in the Joint Utilities' Proposal:

- PGE's analysis indicates that there are 475 distribution feeders that can accommodate a CSP interconnection under the Joint Utilities' Proposal. Of those 475 distribution feeders, 377 feeders can accommodate a 1 MW CSP project, 163 feeders can accommodate a 2 MW CSP project, and 61 feeders can accommodate CSP projects between 2.5 and 3 MW.
- PacifiCorp's analysis indicates that there are a minimum of 390 distribution feeders that can accommodate CSP project interconnections, with potentially more on those circuits that have customer-sensitive information. Of those 390 distribution feeders that are unredacted, 255 feeders can accommodate a 1 MW CSP project, 54 feeders can accommodate a 2 MW CSP project, and 14 feeders can accommodate CSP projects between 2.5 and 3 MW.
- Idaho Power's system in Oregon is more limited, but there are six feeders (out of a total of only 63 Oregon feeders) that could accommodate a CSP interconnection. Although none of the distribution feeders can accommodate a 3-MW CSP interconnection, Idaho Power already has nearly completed the interconnection process for a 3-MW CSP project, which would leave only 300 kW of additional CSP project capacity available in Idaho Power's Oregon service territory for the initial program rollout.

These promising results indicate that an efficiently sized and sited CSP project could easily avail itself of the streamlined interconnection process proposed by the Joint Utilities. Moreover, these results indicate there are many locations on each utility's system where it is likely that a CSP project can interconnect without requiring substantial transmission system network upgrades. However, under Staff's original proposal, a CSP project would have no incentive to site in these

efficient locations because retail customers, including non-participating customers, would fund the cost of any transmission system network upgrades that might otherwise be required.

2. The Joint Utilities' eligibility criteria will measure peak and minimum load at the applicable distribution feeder.

At the workshop, stakeholders were also unclear as to how the eligibility criteria (percentage of peak or minimum load, depending on the utility) would be assessed based on potentially confusing language in the Joint Utilities' Proposal. To clarify, each utility will assess the applicable eligibility requirement based on the distribution feeder load. The publicly available distribution feeder data posted by each utility contains a snapshot of this information for each distribution feeder, as of the posting date.

3. The Joint Utilities' Proposal does not obviate the potential need for transfer trip equipment in every case but may make it less likely that transfer trip will be required.

Stakeholders asked for clarification about whether transfer trip would be required under the Joint Utilities' Proposal. Transfer trip requirements are determined on a case-by-case basis and would be identified in the system impact study. Generally, transfer trip is required when there is potential for generation to be isolated with load beyond a device that has automatic reclosing where the amount of generation closely matches the load.

While the Joint Utilities' Proposal is intended to minimize the likelihood of this generation-to-load match at the substation feeder level, it may not eliminate all circumstances—for example, where a distribution line recloser isolates a smaller subsection of the distribution load with generation, or where the aggregate of generation on multiple feeders or substations closely matches the load isolated by a protective device on the transmission system.

Finally, due to the current unavailability of daytime minimum load data on a per-feeder and per-substation basis in the PacifiCorp and PGE distribution systems, the eligibility thresholds

proposed by PacifiCorp and PGE (percentage of peak load) may not fully avoid cases where the actual daytime minimum load is significantly lower and the sum of connected and proposed generation closely matches the daytime minimum load.

4. The Joint Utilities will work with stakeholders to identify the geographic locations of distribution feeders that can accommodate CSP interconnections.

The publicly posted distribution system data provided by each utility includes a general description of each feeder's location. In particular, the data includes the county where the feeder is located, and in PGE and PacifiCorp's case also describes the geographic area where the feeder is located. PGE and Idaho Power also use feeder naming conventions that often identify the location of a particular feeder. To the extent that this information is insufficient to pinpoint the geographic location of a particular feeder, the Joint Utilities agree to work with developers, as needed, to help them better understand the geographic location of feeders.

Some stakeholders reiterated a desire for the Joint Utilities to provide mapping showing where interconnection capacity is available, rather than providing the information in tabular form. This issue was discussed extensively in docket UM 2001, where the Joint Utilities explained that such maps would be very complicated and time-intensive to create. Because of the difficulty of producing such maps, Staff did not ultimately recommend doing so in docket UM 2001. However, this issue will likely continue to be considered in other dockets.[2]

5. CSP projects already in the interconnection queue will retain their priority position under the Joint Utilities' Proposal.

The crucial benefit of the Joint Utilities Proposal is that it utilizes the net metering-type structure of the CSP to allow the CSP interconnection study process to occur outside of the

[2] Moreover, it is not clear that the value a map would provide to CSP developers is commensurate with the significant time, effort, and expense that would be required to produce a map. Several stakeholders have indicated that they have an extremely limited universe of siting options available for developing a CSP project, so providing resource-intensive system-wide maps may have limited utility.

constraints created by the serial nature of the traditional interconnection queue study process. At the workshop, stakeholders expressed some concern that if a project is already in the traditional interconnection queue, it should maintain its queue priority status if it chooses to move into the CSP queue. The Joint Utilities agree that any CSP project currently in the traditional queue that is eligible to interconnect under the streamlined Joint Utilities' Proposal will maintain its current interconnection queue priority position relative to other CSP projects seeking to interconnect.

To implement this aspect of the proposal, the Joint Utilities recommend that there be a specified time window during which interconnection customers with previously submitted interconnection requests can designate the request as a CSP project. The interconnection customer must provide the same site control documentation that was submitted with the original application request and must size the request appropriately based on the eligibility requirements. If the CSP project designation occurs before the end of the window, the Joint Utilities will consider each CSP interconnection request based on the queue number it was assigned in the larger generation interconnection queue. Any new CSP interconnection requests will be assigned subsequent queue positions. In this way, there will be no disincentive for a CSP project to take advantage of the streamlined interconnection process afforded by the Joint Utilities' Proposal.

6. The Joint Utilities' low-side metering proposal accounts for losses before accounting for the value of the project generation to the subscriber.

The Joint Utilities' Proposal also includes a provision to help reduce interconnection costs by metering a CSP project that is 360 kW or less on the low side of the transformer and performing a calculation to account for conversion losses in the project's output. At the workshop, a stakeholder questioned how this low-side metering proposal would impact the portion of the CSP project generation that is used to assess the value of the project generation to the subscriber, i.e., whether the loss would be reduced from the generation before the valuation occurs or after.

Because generation from CSP projects will be credited against load that is not at the same location, the losses would necessarily be calculated before the crediting occurs. Otherwise, the Joint Utilities would be crediting a subscriber for generation that never reaches the utility's system.

7. The Joint Utilities' Proposal for an enhanced pre-application process for not-for-profit CSP projects applies to governmental agencies.

The Joint Utilities' Proposal includes an enhanced pre-application process that will allow not-for-profit CSP projects to obtain a pre-application report for up to five sites in a single request, and the Joint Utilities will waive the pre-application fee. Each developer would be authorized to submit one request for pre-application reports under this enhanced process. At the workshop, stakeholders requested that the enhanced pre-application process also be made available to governmental agencies. The Joint Utilities agree to this modification.

B. Interconnection cost estimates are reasonable and cost guarantees shift unreasonable risk to retail customers.

Stakeholders expressed general concerns over the uncertainty associated with the cost to interconnect. The Joint Utilities appreciate these concerns but note that interconnection costs are highly dependent on the particular circumstances of the interconnecting project, including the generator's characteristics and the chosen point of interconnection. The Joint Utilities' Proposal addresses these concerns by instituting an enhanced pre-application process to help identify cost-effective interconnection sites for developers that were financially unable to take advantage of the existing pre-application process. The Joint Utilities' Proposal is also designed, in part, to provide greater cost certainty because eligible projects will be unlikely to trigger substantial transmission system network upgrade costs (although they could still trigger distribution upgrade costs).

Moreover, CSP developers seeking to understand and plan for the types or range of potential interconnection costs can look to prior interconnection studies conducted for similarly sized or located projects. All the utilities now post such studies on OASIS.

Stakeholders were also concerned by the fact that cost estimates can change as a project moves through the interconnection study process. However, the cost estimates included in the system impact study are necessarily high-level because those costs are not based on field verification and are made early in the process for designing the facilities required for interconnection. More detailed estimates can be provided only after there is greater design certainty related to the CSP project and the facilities required for interconnection—typically during the facilities study process and, ultimately, during the negotiation of the interconnection agreement. Providing more detailed cost estimates earlier in the interconnection study process would require the Joint Utilities to conduct additional and more detailed analyses earlier in the process, which would necessarily drive up study costs—potentially substantially—and lengthen study timelines.

Finally, imposing a cost cap based on any cost estimates shifts unreasonable costs onto non-participating utility customers—who will ultimately bear any prudently incurred costs to interconnect a CSP project that are not paid by the project owner.

C. The Joint Utilities' interconnection studies are reasonable and transparent.

Several stakeholders claimed vaguely and without specific evidence that the Joint Utilities' interconnection studies are effectively black boxes that customers have little or no opportunity to verify and that the studies are biased against customer interconnections. The Joint Utilities disagree. At each step of the interconnection process, the Joint Utilities provide study results to the customer and work with customers to ensure that they understand the results, including both the required facilities and the basis for the estimated costs. And contrary to stakeholder implications, interconnection customers are free to retain their own experts to assist in the review and verification of the utility studies.

Stakeholders also raised the possibility that each utility should be required to rely on third-party engineering firms to perform interconnection studies, as opposed to using in-house engineers. As explained during the workshop, Idaho Power and PGE have retained third-party engineering firms to perform interconnection studies, or portions thereof, when necessary to address an influx of study requests. But doing so may require the interconnection customer to pay more for the study, which is contrary to the desire of stakeholders. PacifiCorp typically does not use third-party firms to perform its interconnection studies because the serial nature of the queue and the volume of requests make it impractical to outsource the studies. Doing so would only increase costs and delay the study process. For example, PacifiCorp could not outsource a single lower-queued interconnection study to a third-party because that lower-queued study must account for all the relevant higher-queued interconnection studies that must be completed first. PacifiCorp does, however, outsource other engineering work to free up its in-house personnel to focus on interconnection studies.

In addition, several stakeholders expressed an interest in being permitted to retain their own engineers to perform their interconnection studies, rather than relying on the utility's in-house engineers or utility-retained third-party engineering firms. This recommendation is also problematic. First, interconnection studies analyze not only the facilities required on the customer side of the interconnection, but also facilities that must be constructed on the utility system to accommodate the interconnection. The Joint Utilities cannot rely on a customer-developed engineering study to govern the design and construction of interconnection-related facilities on the bulk electric system, because the utility is ultimately responsible for the safe and reliable operation of the bulk electric system. Utility personnel will necessarily have the detailed and intimate knowledge of the utility's system necessary to ensure that the interconnection facilities maintain

the reliability and safety of the bulk electrical system. Moreover, the utility installs, owns, and maintains the equipment on the utility system necessary to accommodate the interconnection, and the utility's facilities must be standardized to ensure the safety of utility workers and accuracy of the installation. For all of these reasons, even when the utility retains its own experts to conduct interconnection studies or perform any other engineering work for the utility, in-house engineering personnel review and verify all study and design results.

Second, having a customer perform its own study is unlikely to materially alter the study results because the utility would still be required by good utility practice to review and verify the results before agreeing to the interconnection facilities and cost estimates provided by the customer. Thus, customer-provided studies would be subject to the same interconnection standards as utility-provided studies. As noted above, customers already may retain their own experts to verify utility studies, and having the customer conduct an initial study that is then verified by the utility is effectively the same process in reverse. In either case, the identified interconnection facilities and estimated costs are likely to be the same.

Third, allowing a customer to perform its own study is unlikely to shorten the study timeline because those third parties would still have to rely on substantial information provided by the utility to begin the study process. And because of the cost of the utility's internal verification of the customer-provided study, the process is likely to be more expensive for the customer overall than the current framework.

D. The Commission can provide different interconnection policies to CSP QFs without illegally discriminating against non-CSP QFs.

Some stakeholders recommend that the streamlined interconnection process approved for CSP projects should apply to all QFs less than 3 MW. Several QF trade groups go so far as to

claim that it is illegal discrimination if all QFs are not afforded the same interconnection process as CSP projects.[3] The Joint Utilities disagree.

First, it is not illegal discrimination to treat differently situated QFs differently. CSP projects are established by state statute and already receive substantially different treatment from non-CSP QFs. For example, the pricing construct applicable to CSP QFs, which includes a combination of bill credits and "as available" pricing, is not available to non-CSP QFs. If providing a different interconnection process is illegal, then so too is the entire CSP.

Moreover, specific to the interconnection process, CSP QFs have been deemed by the state to be participating in a net metering-type program, which is not the case for non-CSP QFs. This different interconnection construct allows for a streamlined interconnection process for CSP QFs that is not available for non-CSP QFs, which are not deemed to be net metering-type projects for purposes of interconnection.

Second, broadening the scope of the CSP interconnection process to non-CSP QFs would be setting broadly applicable QF policy in an expedited proceeding that is narrowly focused on implementing the CSP.[4] Expanding the scope of this effort now to encompass general QF interconnection policy is unreasonable—particularly when the process here has been expedited to accommodate the CSP launch window.

E. The alternative interconnection proposals submitted by stakeholders are worthy of additional consideration but cannot be implemented in the CSP launch window.

The Joint Utilities appreciate the interconnection proposals submitted by Spark Northwest, related to the development of Community Energy Zones, and by the Oregon Solar Energy Industries Association, related to distribution upgrade cost sharing. Each proposal presents

[3] Comments of NIPPC, the Coalition, and CREA on Proposals for Community Solar Interconnection at 2 (Aug. 22, 2019).
[4] Generic dockets considering broadly applicable changes to QF policies are underway. *See infra* Section II.F.

potential advantages and disadvantages that the Joint Utilities are interested in exploring further. However, as stakeholders appeared to concede at the workshop, neither proposal can be implemented in the near-term CSP launch window, and therefore these proposals do not represent viable alternatives to the Joint Utilities' Proposal—which is capable of immediate implementation.

F. Many issues raised by stakeholders are more appropriately addressed in other dockets.

Stakeholders raised several additional issues related to distribution system planning, the availability of interconnection data, and the general system benefits provided by distributed generation. Most of these issues are beyond the scope of this docket and are being actively considered by the Commission in other proceedings, e.g., dockets UM 1911, 2000, 2001, 2005 and 2032.

G. The Joint Utilities recommend that the CSP Program Administrator play a key role in implementing a streamlined interconnection process.

Many stakeholder concerns raised regarding CSP interconnection relate to challenges faced by not-for-profit developers with little or no experience developing these types of projects. Based on these concerns, the Joint Utilities recommend that the Program Administrator provide support for these potential developers, including providing expertise to assist in locating viable and efficient sites and facilitating interconnection cost-sharing mechanisms among CSP developers.

III. CONCLUSION

The Joint Utilities appreciate Staff and stakeholders' diligent efforts to facilitate CSP interconnections. The Joint Utilities are confident that implementation of the Joint Utilities' Proposal, and continued collaborative efforts to educate potential CSP developers, can facilitate CSP interconnections within the timeframe required for a successful launch of the CSP. Therefore, the Joint Utilities urge Staff to promote efficient siting decisions and protect utility customers from bearing potentially significant upgrade costs by adopting the Joint Utilities' Proposal.

Respectfully submitted this 13th day of September, 2019.

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