



# UM 1930 Trade Groups' Presentation

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# John Lowe

- Founder and Executive Director of REC
- Thirty years of experience working with utilities and renewable energy generators
- Previously worked at PacifiCorp on Interconnection and Power Purchase Agreement matters

# Overview

- Not only a PacifiCorp problem
- Not only a community solar problem
  - The creation of a CSP queue was supposed to help resolve interconnection problems, but it has not been effective
- PUC would not allow retail customers to experience these issues
- A long-standing, widespread issue of interconnection
- Interconnection customers have been raising these issues since 2008

# PUC and Utility Responsibilities

- The PUC's role is to protect all interconnection customers, including CSP and non-CSP interconnection customers
- “[T]he commission shall make use of the jurisdiction and powers of the office to protect such customers, and the public generally, from unjust and unreasonable exactions and practices and to obtain for them adequate service at fair and reasonable rates.” ORS 756.040(1).
- The interconnection customer only pays the reasonable costs of the interconnection facilities. OAR 860-082-0035(2).
- “No public utility shall make or give undue or unreasonable preference or advantage to any particular person or locality, or shall subject any particular person or locality to any undue or unreasonable prejudice or disadvantage in any respect.” ORS 757.325(1).
- A public utility may only require a small generator facility to pay for system upgrades that are “necessitated by the interconnection of a small generator facility” and “required to mitigate” any adverse system impacts “caused” by the interconnection. AR 521, Order No. 09-196.

# Publicly Known Disputes

- *Pac. Nw. Solar, LLC (Amity Project) v. PGE*, Docket No. UM 1902 (Oct. 9, 2017)
- *Butler Solar, LLC v. PGE*, Docket No. UM 1903 (Oct. 9, 2017)
- *Pac. Nw. Solar, LLC (Duus Project) v. PGE*, Docket No. UM 1904 (Oct. 9, 2017)
- *Pac. Nw. Solar, LLC (Stringtown Project) v. PGE*, Docket No. UM 1907 (Oct. 9, 2017)
- *Pac. Nw. Solar, LLC (Starlight Project) v. PGE*, Docket No. UM 1906 (Oct. 9, 2017)
- *Dunn Rd. Solar v. PGE*, Docket No. UM 1963 (July 26, 2018)
- *Sandy River Solar, LLC v. PGE*, Docket No. UM 1967 (Aug 24, 2018)
- *Madras PVI, LLC v. PGE*, Docket No. UM 2009 (Apr. 22, 2019)
- *Waconda Solar, LLC v. PGE*, Docket No. UM 1971 (Sept. 28, 2018)
- *Zena Solar, LLC v. PGE*, Docket No. UM 2074 (Mar. 27, 2020)
- *Sunthurst Energy, LLC v. PacifiCorp*, Docket No. UM 2118 (Sept. 29, 2020)
- *Dalreed Solar, LLC v. PacifiCorp*, Docket No. UM 2125 (Nov. 3, 2020)
- *Sunthurst Energy, LLC v. PacifiCorp*, Docket No. UM 2177
- *Zena Solar, LLC v PGE*, Docket No. UM 2164 (May 24, 2021)
- *In Re Carnes Creek Solar, LLC, Petition for Waiver of OAR 860-082-0025(1)(c)*, Docket No. UM 1631 (Apr. 23, 2020)
- *In Re Marquam Creek Solar, LLC, Petition for Waiver of OAR 860-082-0025(1)(c)*, Docket No. UM 1631 (Jan. 25, 2021)
- *Cherry Creek Solar Notice of Intent to File Complaint of Enforcement*, Docket No. UM 2298 (July 18, 2023)
- *Green Solar Notice of Intent to File Complaint of Enforcement*, Docket No. UM 2305 (Oct. 23, 2023)

# Summaries

## Carnes Creek Solar

**Docket:** UM 1631

**Filed:** 1/19/2018

**Closed:** 8/3/2020 Order No. 20-245

**Case Status:** Settled

**Description:** The QF was pre-certified to participate in the Community Solar Program. During the interconnection process, a larger, higher queued project pulled out of the queue, and left the QF with a larger upgrade cost. With the QF's original nameplate capacity it would have pushed the interconnection point over its daytime minimum load, which would necessitate substantial upgrades to the system. The QF, in response, wanted to reduce their nameplate capacity in order to avoid some of these additional interconnection costs.

The initial estimate for the interconnection was \$101,000, which then jumped to over \$768,000 with the withdrawal of the higher-queued project. Of the new total, \$739,000 was for protection and fiber optic communication requirements to prevent generation from the QF from backfeeding into the substation transformer and onto PGE's transmission system, where such backfeeding could create adverse system impacts. The QF filed a waiver so that they could request that PGE accept its nameplate capacity reduction, without having to pay for a new interconnection study, up to the amount of the amount allowed under the CSP. PGE was not agreeable to requesting a waiver.

## Marquam Creek Solar

**Docket:** UM 1631

**Filed:** 1/25/2021

**Closed:** 5/7/2021, Order No. 21-145

**Case Status:** Waiver Granted

**Description:** The QF had already secured a fully executed IA with PGE for its community solar facility that contained an interconnection cost estimate of \$268,350, which would allow the facility to be brought into service. PGE subsequently proposed to re-study the QF's interconnection after a higher queued project withdrew from the queue. As a result of the restudies, PGE asserted that the QF's generation will cause backfeeding onto PGE's system that requires extensive and costly 3V0 sensing upgrades, with total estimated interconnection costs in PGE's latest SIS to be \$1,100,053. In response, the QF wanted to reduce their nameplate capacity by 88kW to place their output under the threshold indicated in the SIS and thus avoid the extra interconnection costs. The QF filed waiver so that they could request that PGE accept its nameplate capacity reduction, without having to pay for a new interconnection study. PGE was not agreeable to requesting a waiver. Commission granted the waiver.

# Summaries

## **Pacific Northwest Solar (Amity Project)**

**Docket:** UM 1902

**Filed:** 10/9/2017

**Closed:** 7/4/2019, Order No. 19-199

**Case Status:** Settled

**Description:** PGE failed to meet several deadlines during the interconnection process, resulting in delays of 5 to 6 months. PGE also failed to include schedules that were reasonable in its Feasibility Study Agreement, System Impact Study Agreement and Facilities Study Agreement. PGE acknowledged some delays were possible and claimed that their interconnection personnel and engineers made reasonable, good faith efforts to accurately estimate the time required to complete the Feasibility, System Impact, and Facilities Studies and to adhere to those estimates in completing the Studies, in light of the rapidly increasing number of interconnection requests. The Feasibility Study had a 106 calendar day turn around and the total delay, at the time of filing, was 205 calendar days from the originally agreed upon schedule, and the total study time was 311 days at the time the complaint was filed.

## **Butler Solar**

**Docket:** UM 1903

**Filed:** 10/9/2017

**Closed:** 7/4/2019, Order No. 19-199

**Case Status:** Settled

**Description:** PGE failed to meet several deadlines during the interconnection process, resulting in delays of 6 to 7 months. PGE also failed to include schedules that were reasonable in its Feasibility Study Agreement, System Impact Study Agreement and Facilities Study Agreement. PGE acknowledged some delays were possible and claimed that their interconnection personnel and engineers made reasonable, good faith efforts to accurately estimate the time required to complete the Feasibility, System Impact, and Facilities Studies and to adhere to those estimates in completing the Studies, in light of the rapidly increasing number of interconnection requests. The Feasibility Study had a 99 calendar day turn around and the total delay, at the time of filing, was 230 calendar days from the originally agreed upon schedule and the total study time was 329 days at the time the complaint was filed.

# Summaries

## **Pacific Northwest Solar (Duus Project)**

**Docket:** UM 1904

**Filed:** 10/9/2017

**Closed:** 7/4/2019, Order No. 19-199

**Case Status:** Settled

**Description:** PGE failed to meet several deadlines during the interconnection process, resulting in delays of 10 to 11 months. PGE also failed to include schedules that were reasonable in its Feasibility Study Agreement, System Impact Study Agreement and Facilities Study Agreement. PGE acknowledged some delays were possible and claimed that their interconnection personnel and engineers made reasonable, good faith efforts to accurately estimate the time required to complete the Feasibility, System Impact, and Facilities Studies and to adhere to those estimates in completing the Studies, in light of the rapidly increasing number of interconnection requests. The Feasibility Study had a 93 calendar day turn around, the total delay, at the time of filing, was 330 calendar days from the originally agreed upon schedule, and the total study time was 423 days at the time the complaint was filed.

## **Pacific Northwest Solar (Firwood Project)**

**Docket:** UM 1905

**Filed:** 10/9/2017

**Closed:** 7/4/2019, Order No. 19-199

**Case Status:** Settled

**Description:** PGE failed to meet several deadlines during the interconnection process, resulting in delays of 10 to 11 months. PGE also failed to include schedules that were reasonable in its Feasibility Study Agreement, System Impact Study Agreement and Facilities Study Agreement. PGE acknowledged some delays were possible and claimed that their interconnection personnel and engineers made reasonable, good faith efforts to accurately estimate the time required to complete the Feasibility, System Impact, and Facilities Studies and to adhere to those estimates in completing the Studies, in light of the rapidly increasing number of interconnection requests. The Feasibility Study had a 165 calendar day turn around and the total delay, at the time of filing, was 340 calendar days from the originally agreed upon schedule, and the total study time was 505 days at the time the complaint was filed.



# Summaries

## **Pacific Northwest Solar (Starlight Project)**

**Docket:** UM 1906

**Filed:** 10/9/2017

**Closed:** 7/4/2019, Order No. 19-199

**Case Status:** Settled

**Description:** PGE failed to meet several deadlines during the interconnection process, resulting in delays of 6 to 7 months. PGE also failed to include schedules that were reasonable in its Feasibility Study Agreement, System Impact Study Agreement and Facilities Study Agreement. PGE acknowledged some delays were possible and claimed that their interconnection personnel and engineers made reasonable, good faith efforts to accurately estimate the time required to complete the Feasibility, System Impact, and Facilities Studies and to adhere to those estimates in completing the Studies, in light of the rapidly increasing number of interconnection requests. The Feasibility Study had a 106 calendar day turn around and the total delay, at the time of filing, was 230 calendar days from the originally agreed upon schedule, and the total study time was 336 days at the time the complaint was filed.

## **Pacific Northwest Solar (Stringtown Project)**

**Docket:** UM 1907

**Filed:** 10/9/2017

**Closed:** 7/4/2019, Order No. 19-199

**Case Status:** Settled

**Description:** PGE failed to meet several deadlines during the interconnection process, resulting in delays of approximately 4 months. PGE also failed to include schedules that were reasonable in its Feasibility Study Agreement, System Impact Study Agreement and Facilities Study Agreement. PGE acknowledged some delays were possible and claimed that their interconnection personnel and engineers made reasonable, good faith efforts to accurately estimate the time required to complete the Feasibility, System Impact, and Facilities Studies and to adhere to those estimates in completing the Studies, in light of the rapidly increasing number of interconnection requests. The Facilities Study had a yet to be received by the QF at the time of filing and the total delay, at the time of filing, was 115 calendar days from the originally agreed upon schedule.

# Summaries

## **Dunn Rd. Solar**

**Docket:** UM 1963

**Filed:** 7/26/2018

**Closed:** 11/9/2018, Order No. 18-434

**Case Status:** Voluntarily Withdrawn

**Description:** The Facilities Study (and subsequent revised Facilities Study) provided by PGE only contained a brief overview of the facilities required and a generic listing of the costs. It contained no information about the existing facilities or the design for the new facilities. PGE did not provide, and refused to provide any additional, information. PGE proposed some facilities and system upgrades that were not necessary to the QF's interconnection under the IEEE standards, and PGE cited to no other industry standard or prudent electrical practice which justified its proposal other than its own internal standard as the grounds for justifying its upgrades.

PGE stated that the transfer trip scheme and new substation relays required by the Revised Facilities Study were necessary to ensure that the QF would cease to energize the Feeder within 2 seconds of the formation of an unintentional island as required by IEEE 1547 Section 4.4.1, and to ensure that the Project would not backfeed PGE's system if there was a ground fault or other contingency on the high-side of the 57 kV Substation transformer. PGE further stated that additional upgrades to the system were necessary because higher-queued projects withdrew from the queue, thereby forcing the QF to pay for upgrades because the aggregate solar generation on the Feeder would then exceed the daytime minimum load. The initial SIS estimated the interconnection costs to be \$200,000. The Facilities Study estimated the cost to be \$302,000 because of a higher-queued project pulling out, however PGE did not specify in that study exactly what changes would need to be made to safely interconnect the QF.

## **Madras PV1, LLC**

**Docket:** UM 2009

**Filed:** 4/22/2019

**Closed:** 4/26/2021 Order No. 21-126

**Case Status:** Settled

**Description:** The QF sought to enter into a PPA with PGE. During that process, PGE caused delay and insisted on unreasonable terms and conditions being included in the PPA. Foremost of these was the requirement that the QF enter into an interconnection agreement, or certain related agreements, prior to receiving a draft PPA. PGE also initially refused to provide indicative pricing for four months from the QF's initial request, and then delayed a draft PPA for another six months because it believed that the point of interconnection for the project could not be accommodated and therefore refused to consider it. PGE also failed to respond in reasonable timeframes to the QF's requests to negotiate the PPA or to move the negotiations forward through exchanges of information. Ultimately, PGE agreed upon the POI and that the interconnection studies did not need to be completed prior to contract execution. However, the initial estimate for the interconnection was roughly \$392 million for an NRIS interconnection (which included completely rebuilding 99 miles of transmission lines) and \$51 million for ERIS. Improvements of such magnitude would surely be considered Network Upgrades, and thus fall under the jurisdiction of the utility. After a restudy and an admittance of PGE's mistake in the initial study, the interconnection cost was reduced to \$27 million for NRIS and \$3 million for ERIS interconnection. Furthermore, because of the delays, the date for PGE's new, reduced, avoided-cost pricing was drawing near, which the QF believed to be a possible cause for the multitude of delays. From the initial date the QF requested indicative pricing to the filing of the complaint was a total of 552 calendar days, during which no PPA had been executed.

# Summaries

## **St. Louis Solar**

**Docket:** UM 2057

**Filed:** 2/3/20

**Closed:** 7/13/2021, Order No. 21-221

**Case Status:** Jointly Dismissed

**Description:** The QF and PGE already had a completed PPA and interconnection agreement signed. Due to multiple delays in the interconnection process, the PPA was amended twice to extend the COD. Due to the repeated delays, the QF would be unable to receive the benefits of the fixed-price payments in the PPA. The PPA provided 15 years of fixed price payments starting from the date of execution. PGE sued the QF for damages and refused to further extend the COD, which would result in the potential termination of the PPA. The initial PPA was signed in June 2016, in which the interconnection was said to take approximately 12 months to complete. The facility completed construction in December 2018 and as of the time of filing no agreement had been reached. February 10, 2019, passed, and St. Louis Solar missed its COD. On February 11, 2019, PGE provided a notice of default under the PPA. In March 2019, the QF inquired about interconnection, and PGE asserted that the QF had no claim to interconnection sooner than the last date in the interconnection agreement (October 31, 2019). In April 2019, PGE began sending monthly bills to the QF for alleged damages from the failure to achieve COD pursuant to the PPA. At the time of filing, the QF had paid over \$600,000 for interconnection service, paid over \$20,000 for PGE's alleged damages, and had lost substantial revenues under the PPA.

## **Zena Solar**

**Docket:** UM 2074

**Filed:** 3/27/2020

**Closed:** 8/12/2020, Order No. 20-264

**Case Status:** Settled

**Description:** PGE completed a SIS for the QF, and the QF and PGE entered into a Facility Study Agreement for PGE to conduct the Facility Study. Less than two weeks after the Facility Study Agreement was executed, a higher queued project withdrew. PGE did not notify the QF of the change in queue. Instead, PGE made the decision to not conduct a new SIS and instead relied on an older SIS for a different project to produce a Facility Study for the QF. PGE then hid the fact that it relied upon an older SIS for a different project and admitted that it used a SIS for a different project only after the QF repeatedly questioned the accuracy of the Facility Study. The QF identified multiple discrepancies and errors with both the resulting Facility Study as well as the old SIS for the withdrawn, higher-queued project. PGE dismissed all concerns by the QF and then demanded that the QF execute an interconnection agreement, at the QF's expense, or forfeit its position in the interconnection queue. The QF asked to be allowed to have an independent third-party contractor conduct the SIS, but PGE refused.

In the Facility Study, PGE estimated that the QF would need to pay a total of \$804,926 to interconnect the project, including \$459,600 for protection requirements and \$195,326 for communication requirements. In the second SIS, PGE estimated that the QF would need to pay a total of \$324,312, including \$58,500 for protection requirements and \$74,812 for communication requirements. PGE's total cost estimate in the Facility Study is greater than the combined total cost estimate in the second SIS and the cost estimate for the QF's pre-requisite requirements in the SIS for the previously highest-queued project.

# Summaries

## Zena Solar

**Docket:** UM 2164

**Filed:** 5/24/2021

**Closed:** 4/29/2022, Order No. 22-134

**Case Status:** Claims Denied with Prejudice

**Description:** PGE's position is that the QF should be responsible for the costs of the installation of a 3V0 protection scheme at PGE's substation. The QF's position is that PGE's substation, as it is already designed and currently operated, is already exposed to conditions requiring 3V0 protection. Therefore, the QF should not be responsible for any costs associated with additional protection for the substation because the QF has not caused any adverse system impacts necessitating 3V0 protection. The QF also asked the Commission to determine whether PGE's specific upgrades and proposed costs are reasonable and whether they are consistent with Good Utility Practice. The QF disputed the upgrades required by PGE as being too costly and unnecessary. The QF proposed two different alternative methods that would be lower cost and equally reliable to mitigate and protect against 3V0 according to IEEE standards. The QF had an iSIS study completed, after which PGE agreed to one change, but stated that the rest were still necessary to protect the system. The iSIS indicated that the substation the QF proposed to connect to was already exposed to 3V0 issues and that the upgrades would have been required regardless of the QF's interconnection. Commission denied claims and granted counterclaims in part.

## Dalreed Solar II

**Docket:** UM 2182

**Filed:** 6/25/2021

**Case Status:** Settled

**Description:** The sole disputed PPA provision is when the QF must pay pre-COD security. PGE proposed that the QF pay the security within 30 days of PPA execution, while the QF proposed to pay within 30 days of receiving its SIS from PGE. The Feasibility Study was completed 205 calendar days after the FERC-mandated 45 day window, and the QF does not expect to receive a SIS until late October 2021.

The SIS had also been delayed. Negotiations for the PPA began June 1, 2020 and had not yet been executed at the time of the filing. The QF also alleged that the security amount is much higher and due earlier than is necessary or standard in most QF PPAs. The developer of the QF had been involved in over a dozen other QF PPAs with other utilities and all had required a smaller pre-COD payment, due at a later date, thus making PGE's demands inconsistent with other utilities' practices.

# Summaries

## **Sunthurst Energy**

**Docket:** UM 2118

**Filed:** 9/29/2020

**Closed:** 9/15/2021, Order No. 21-296

**Case Status:** Dismissed with Prejudice

**Description:** Developer had two pre-certified Community Solar Program QFs seeking to interconnect with PAC. The developer contended that the unreasonable costs and unnecessary metering requirements threatened to make the projects economically infeasible, as they would no longer be eligible for a higher federal Tax Income Credit, which was set to expire at the end of the year. Even though neither project required network upgrades, nor would they produce excess generation in the load pocket, PAC was still estimating a total interconnection cost of over \$1M (\$202/MW). PAC made some corrections after direct testimony which reduced the cost by a total of \$141,728. The QF also disputed the need for branch regulators, which totaled about \$180,000, because the system had operated safely without them after a regulator control unit failed and was not replaced for 13 days. PAC conceded these were only included to prevent line loss, ignoring the economic feasibility of having a third-party foot the bill. PAC initially required three meters for the two projects, even though the initial study, and a study done by the developer's own engineer, only required two. After negotiations, PAC agreed to cover the cost of the additional meter, another \$39,000 off of the original estimate.

## **Waconda Solar**

**Docket:** UM 1971

**Filed:** 9/28/2018

**Case Status:** Jointly Dismissed

**Description:** Following PGE's admitting errors on the initial Feasibility Study, the QF wanted to be allowed to hire a third-party contractor to execute various interconnection studies, and conduct an independent system impact study. PGE previously agreed that PGE and an applicant could agree to allow the applicant to hire third-party consultants to complete any interconnection facilities and system upgrades. The QF also noted that PGE itself sometimes uses third-party contractors to do the studies. PGE delayed and made inconsistent statements in the interconnection study process and, according to the complaint, unreasonably refused to allow the QF to hire a third-party to complete the interconnection studies. PGE did not give any specific reasons for refusing to allow a third-party contractor to complete the studies. The QF noted that there can be significant delays and costs for interconnection customers when studies are delayed, inaccurate, or incomplete.

# Summaries

## **Surprise Valley Electrification**

**Docket:** UM 1742

**Filed:** 6/22/2015

**Closed:** 8/22/2016 Order No. 16-317

**Case Status:** Settled

**Description:** PAC refused to enter into a PPA with the QF because of its off-grid status and delayed the negotiations until after new avoided cost schedules went into effect. The QF requested the Commission to rule that it had entered into an LEO with PAC prior to that date in order to protect their rates. PAC stated that the QF would not be a QF if Surprise Valley used the net output to offset power purchased from BPA and that was transmitted to Surprise Valley by PacifiCorp. PAC did not identify any provision of Oregon or FERC law, rules, policies, or Schedule 37 to support its statement.

PAC previously described the QF as first an off system QF, then as on system, and then through most of the negotiations as an on/off system QF. After the QF filed the complaint, PAC adopted the position that the project was an off system QF and must provide “transmission arrangements” to deliver the net output across Surprise Valley’s transmission system to be eligible to sell the entire net output. During the negotiations, PAC filed revised Schedule 37 contracts and rates, which were a reduction from their previous rates. These arrangements meant that a new transmission system would have to be constructed to route the power around the Surprise Valley load area, where it was intended for use, to the transmission input on the opposite side of the load area. From the date the QF initially requested a PPA from PAC to the date of the filing, during which no PPA was executed, was 686 calendar days.

## **Sunthurst Energy**

**Docket:** UM 2118

**Filed:** 9/29/2020

**Closed:** 9/15/2021, Order No. 21-296

**Case Status:** Dismissed with Prejudice

**Description:** Developer had two pre-certified Community Solar Program QFs seeking to interconnect with PAC. The developer contended that the unreasonable costs and unnecessary metering requirements threatened to make the projects economically infeasible, as they would no longer be eligible for a higher federal Tax Income Credit, which was set to expire at the end of the year. Even though neither project required network upgrades, nor would they produce excess generation in the load pocket, PAC was still estimating a total interconnection cost of over \$1M (\$202/MW). PAC made some corrections after direct testimony which reduced the cost by a total of \$141,728. The QF also disputed the need for branch regulators, which totaled about \$180,000, because the system had operated safely without them after a regulator control unit failed and was not replaced for 13 days. PAC conceded these were only included to prevent line loss, ignoring the economic feasibility of having a third-party foot the bill. PAC initially required three meters for the two projects, even though the initial study, and a study done by the developer’s own engineer, only required two. After negotiations, PAC agreed to cover the cost of the additional meter, another \$39,000 off of the original estimate.

# Summaries

## **Dalreed Solar**

**Docket:** UM 2125

**Filed:** 11/3/2020

**Closed:** 2/11/2022, Order No. 22-049

**Case Status:** Voluntarily Withdrawn

**Description:** The QF requested a draft PPA from PAC but was denied because an interconnection study had not been completed. The QF had requested, and received from PAC, indicative pricing, effectively beginning the PPA negotiation process. PAC then refused to provide the QF with a draft PPA until the interconnection study had been completed, a practice they say was in compliance with all laws and regulations. Without a fully executed PPA the QF would not be able to obtain financing. The QF asserted that, because they were already in the new cluster study queue, according to PURPA, PAC was required to continue PPA negotiations and that by denying the QF a draft PPA PAC was in violation of federal law. PAC maintained its position. The QF would also only have 30 days after the transition cluster study results to elect to participate in a Facilities Study. Therefore, if the QF was not permitted to proceed with the PPA negotiation process, then it would be required to choose to participate in the Facilities Study without reviewing and knowing what terms, conditions, or prices may be part of its eventual PPA.

PAC, right before oral arguments in front of the Commission, provided the QF with a draft PPA. The Commission left the docket open in order to monitor PAC's behavior. According to the Commission there was concern about PAC's continued willingness to provide draft PPAs to QFs before they have received cluster study results and to expeditiously negotiate PPAs during the cluster study process and after the cluster study report is available. The QF requested the Commission investigate PURPA violations, which the order declined.

## **Sunthurst Energy**

**Docket:** UM 2177

**Filed:** 6/3/2021

**Case Status:** Ongoing Litigation

**Description:** PAC sent the QF notice of intent to remove the project from the interconnection queue unless they complete the Facilities Study agreements. The QF requested an extension of deadlines PAC had imposed upon it, until PAC had meaningfully addressed the QF's concerns with the interconnection studies. The QF further requested PAC explain why 3 of 3 of the developer's interconnection requests have been reconfigured by PAC during the study process, and state whether PAC will assist the QF in mitigating resulting cost impacts. For two of the SIS, PAC was using different IEEE standards than had been approved by the Commission for the CSP, which, after questioning by the QF, they agreed to remove. PAC had not shown the need for re-conductoring, yet continued to require re-conductoring, at a cost of more than \$400,000 (the initial cost for the project to interconnect was roughly \$1M). The QF questioned why PAC was applying a standard that is more stringent than IEEE 1547-2018, where even IEEE 1547-2018 would not call for re-conductoring in the interconnection in question. PAC further refused to split the interconnection costs with the QF.

# Summaries

## **Sandy River Solar**

**Docket:** UM 1967

**Filed:** 8/24/2018

**Closed:** 8/29/2019, Order No. 19-285

**Case Status:** Voluntarily Withdrawn

**Description:** The QF was concerned about PGE's interconnection practices because the studies they received only contained generalized categories on the study's overview, scope, assumptions, affected systems, interconnection requirements, costs, and a schedule. The studies also did not contain any analysis or results and did not detail the impact to PGE's system. As a result, the QF asked to be able to hire a third-party consultant to do the study and interconnection construction. PGE did not agree to allow a third-party consultant on this, or indeed any other QF interconnection projects, at the time of the filing.

PGE indicated that both the facilities study and the revised facilities study required the installation of a new service and metering package and a transfer trip protection scheme with a fiber optic communication channel. PGE further indicated that both the original and revised facilities study estimate the cost of the required interconnection facilities and system upgrades to be \$122,954 and would require 18 months of construction time from the execution of an interconnection agreement.

The QF wanted to hire a third-party consultant to construct the required interconnection facilities and system upgrades pursuant to OAR 860-082-0060(8)(f). PGE disputed the claim, stating that a third-party contractor had to be approved by both parties, which they did not approve of despite admitting to being understaffed and behind schedule for their interconnection queue, and having hired their-party contractors themselves in the past.

Earlier in the docket, Order No. 19-218 was issued in response to PGE's Motion for Summary Judgment. PGE argued that OAR 860-082-0060(8)(f) allowed them sole discretion over the allowance of third-party contractors to perform interconnection studies and construction. The QF stated that the rule was intended to provide a remedy for interconnection customers experiencing delays or problems with the utility, and it was understood that a utility's consent to use third parties would not be unreasonably withheld. In the order, the Commission stated that the rule as written does not include a reasonableness standard, and therefore PGE could unreasonably decide not to allow the QF to hire a third party to construct the interconnection facilities. The Commission concluded that OAR 860-082-0060(8)(f) as written did not include a reasonableness standard, and noted that requirements regarding the use of third-party consultants in the interconnection process would be further considered in Docket UM 2000.



# Summaries

## Cherry Creek Solar

**Docket:** UM 2298

**Filed:** Notice filed July 18, 2023

**Case Status:** Pending Litigation

**Description:** The details regarding this dispute stem from a disagreement about the cause and solution to QF being tripped offline. QF was tripped offline four times since energization on May 16, 2023. PAC claimed there were meter issues that caused QF to be tripped offline. QF investigated the issue and determined QF's recloser is being tripped offline because PAC's grid is operating at voltages outside their own power quality standards in PAC's Engineering Handbook and PAC's 2022 Electric Service Requirements Manual. On June 16, 2023, QF proposed three solutions to PAC to resolve this issue, but received no substantive response from PAC. Each time QF is tripped offline someone has to go onsite and physically close the recloser in order to start producing electricity again. These trips are causing the facility to produce less electricity, which is causing harm to QF and its subscribers, fifty percent of whom are low income.

## Green Solar

**Docket:** UM 2305

**Filed:** Notice filed October 23, 2023

**Case Status:** Pending Litigation

**Description:** The details regarding this dispute stem from a disagreement about the scope of work related to the interconnection of QF and the delays in interconnection of QF. In June 2022, QF finalized interconnection payments to PAC based on the scope of work for interconnection as laid out in Attachment 6 of the Interconnection Agreement. In July 2022, QF first provided PAC initial designs and began seeking design approval and was in regular communication with PAC regarding status of the project. In January 2023, QF began construction, which was completed on April 23, 2023. QF constructed the facility based on the scope of work in the Interconnection Agreement. PAC first notified QF in February 2023 that the project's interconnection would be delayed until March 2024. Later, PAC agreed to an interconnection date to November 2023 (over one year after the October 21, 2022 date in the Interconnection Agreement). On May 19, 2023, PAC provided an Interconnection Agreement Amendment to QF that had a commercial operation date of November 30, 2023. QF did not execute the Interconnection Agreement Amendment because it contained new requirements on the scope of work for QF that was not contemplated in the original Interconnection Agreement and QF had already finished construction of the project. Specifically, the Interconnection Agreement Amendment required QF to secure a third-party easement for a utility-owned pole that was not contemplated in the original Interconnection Agreement. The Interconnection Agreement Amendment also updated project information related to inverters, the one-line diagram, and added a requirement related to access roads, but none of these changes are in dispute here. PAC is delaying interconnection of QF because it is prioritizing completion of transmission upgrades related to communication at the Culver substation, which is unrelated to QF. This transmission upgrade was not listed as a higher priority request in the System Impact Study or Facilities Study as referenced in Appendix A of these studies that listed higher-priority requests. PAC now estimates interconnection will not be complete until February 2024. PAC could interconnect QF before it finishes this transmission upgrade, but PAC has refused. QF has requested that PAC commit to interconnect QF by November 30, 2023. However, PAC has so far refused. Delay in interconnection is causing harm to QF and its community solar subscribers.

# Types of Issues

- Lack of transparency and communication from utilities about utility-side interconnection delays
- Schedules in interconnection studies from utilities are not always realistic timelines
- Utility interconnection errors in construction
- Utility interconnection scheduling delays (utility procurement of resources, staffing, etc.)
- Utility refusal to allow interconnection customers to hire third parties
- Expensive or unnecessary interconnection upgrades
- Utility failure to timely communicate or meet with interconnection customers
- Limited ability to obtain low cost, timely remedies
- Delays in the interconnection study process
- No recourse for utility missed deadlines or milestones
- PacifiCorp requires full project design early in interconnection process, but not needed that early as exact project design does not change what the utility needs to buy for their portion of the build
- Requirements not clear in the IA, which leads to disputes on scope of work
- The timing of interconnection cost payments

# Example: Access Roads

- In PacifiCorp's Status Summary for Q3 2023, PacifiCorp states the application did not meet milestones dates for Hay Creek Solar, Wocus Marsh Solar, and Whisky Creek Solar
- PacifiCorp was requiring gravel roads for these projects, but not included in the Interconnection Agreements or specified in PacifiCorp manuals
- Caused increased costs and delay in interconnection
- Developer would have designed projects differently if it had known about this requirement
- Other sites in PacifiCorp territory that did not have gravel roads
- PacifiCorp then sent Interconnection Agreement Amendments to various developers related to access roads

# Responses

Project (not interconnected)	PAC Response, OPUC Attach 3	OPUC Public Filing Narratives	Interconnection as a Cause of Delay?	Additional Information from PacifiCorp Q3 Summary Document from UM 1930
7 Mile Solar, LLC	OCS038: Project was sold by original developer. No engagement of new owner with PacifiCorp.	"The Project Manager cites interconnection utility delays pushing back the commercial operation date." and "All of these projects have executed all construction contracts, building permits, and required interconnection documents. We are experiencing utility delays pushing back our COD dates to Q1 and Q2 2024."	Yes	PacifiCorp states no engagement from developer but the Q3 Summary document states PacifiCorp and developer have agreed to revised milestones and there were previously agreed to CODs of 8/15/2022, 12/9/2022, 7/21/2023
Antelope Creek Solar, LLC	OCS046: Project was sold by original developer. No engagement of new owner with PacifiCorp.	"All of these projects have executed all construction contracts, building permits, and required interconnection documents. Both projects are on track to meet their COD dates in Q1 2024 and Q2 2024, however, we are experiencing utility delays where the utility has not completed their interconnection work for both projects."	Yes	PacifiCorp states no engagement from developer but the Q3 Summary document states PacifiCorp and developer have agreed to revised milestones and there were previously agreed to CODs of 8/15/2022, 12/16/2022, 7/28/2023
Burg Solar LLC	OCS041: Project was sold by original developer. No engagement of new owner with PacifiCorp.	"Burg Solar LLC has requested a one-year Certification extension due to construction delays" and "We acquired these projects from SolRiver in Q2 2023. Since acquiring the projects, we have begun procuring long lead time items (i.e. transformers), have engaged an EPC and have subscribed 22% of Burlingame Solar. Due to the inability of the contractor to work during winter months and the contractor's overall schedule, we are asking for a Certification Deadline extension for 9/30/2024 for both projects."	No	PacifiCorp states no engagement from developer but the Q3 Summary document states PacifiCorp and developer have agreed to revised milestones and there was a previously agreed to COD of 9/23/2022
Burlingame Solar LLC	OCS008: Project was sold by original developer. No engagement of new owner with PacifiCorp.	"Burlingame Solar LLC has requested a one-year Certification extension due to construction delays." "No and "We acquired these projects from SolRiver in Q2 2023. Since acquiring the projects, we have begun procuring long lead time items (i.e. transformers), have engaged an EPC and have subscribed 22% of Burlingame Solar. Due to the inability of the contractor to work during winter months and the contractor's overall schedule, we are asking for a Certification Deadline extension for 9/30/2024 for both projects."	No	PacifiCorp states no engagement from developer but the Q3 Summary document states PacifiCorp and developer have agreed to revised milestones and there were previously agreed to CODs of 5/17/2022, 3/17/2023 (listed as 2022, but think error)

# Responses

Project (not interconnected)	PAC Response, OPUC Attach 3	OPUC Public Filing Narratives	Interconnection as a Cause of Delay?	Additional Information from PacifiCorp Q3 Summary Document from UM 1930
Canyonville Solar 1, LLC	OCS050: This project is being redesigned by the developer along with OCS051.	"The project has experienced supply chain delays and is expecting delivery of panels in Fall 2023. The Project Manager also cites interconnection delays outside of the developer's control and has not received a new utility timeline for interconnection, including a timeline for a revised point of interconnection plan." and "It became clear by the Winter of 2022 that many of the critical Utility milestones in each of the Interconnection Agreements were not complete by the dates set forth therein. The Developers requested formal schedule amendments to the Interconnection Agreements in December of 2022 for each of the Projects. ... New schedules remain unavailable...While the Developers appreciate meetings that have been held with the utilities, the lack of written agreement regarding the utility timeline creates a significant risk (outside of the Developer's control)" and summary that Canyonville 1 and 2 need to be restudied for new, single POI and they have not received the Facilities Study or updated IAs	Yes	
Canyonville Solar 2, LLC	OCS051: This project is being redesigned by the developer along with OCS050.	"The project has experienced supply chain delays and is expecting delivery of panels in Fall 2023. The Project Manager also cites interconnection delays outside of the developer's control and has not received a new utility timeline for interconnection, including a timeline for a revised point of interconnection plan." and "It became clear by the Winter of 2022 that many of the critical Utility milestones in each of the Interconnection Agreements were not complete by the dates set forth therein. The Developers requested formal schedule amendments to the Interconnection Agreements in December of 2022 for each of the Projects. ... New schedules remain unavailable...While the Developers appreciate meetings that have been held with the utilities, the lack of written agreement regarding the utility timeline creates a significant risk (outside of the Developer's control)" and summary that Canyonville 1 and 2 need to be restudied for new, single POI and they have not received the Facilities Study or updated IAs	Yes	
Chapman Creek Solar, LLC	OCS049: Current date will not be met. No engagement has been engaged. The Certification request from developer.	"Chapman Creek is 60% subscribed and an engineering, procurement, and construction company delays 2) the contractor's overall schedule and other constraints."	Yes	PacifiCorp states no engagement from developer but the Q3 Summary document states PacifiCorp and developer have agreed to revised milestones and there were previously agreed to CODs of 11/30/2022, 10/31/2023
Green Solar LLC	OCS045: Interconnection customer did not meet early milestones. Additional design, material procurement and construction time needed than what was assumed in study by PacifiCorp.	"Green Solar is currently 99% subscribed and the project is mechanically complete. The requested extension is due to the developers experiencing delays due to utility interconnection issues beyond their reasonable control." and summary that PacifiCorp installed wrong poles and had to conduct a ground survey, which PAC is reviewing now and PAC estimates interconnection in feb/mar 2024	Yes	

# Responses

Project (not interconnected)	PAC Response, OPUC Attach 3	OPUC Public Filing Narratives	Interconnection as a Cause of Delay?	Additional Information from PacifiCorp Q3 Summary Document from UM 1930
Kelly Creek Solar, LLC	OCS039: Current date will not be met. Project was sold by original developer. No engagement of new owner with PacifiCorp.	"The Project Manager cites the reason for the extension as the inability for the contractor to work during the winter months due to the overall schedule and other constraints." and "An EPC has been engaged and building permits for Mompano and Kelly Creek are expected within the next 3 months. PPA execution is expected in the next 3 months. Further, all major equipment (modules and transformers) has been purchased. The request for an extension is due to 1) the inability for the contractor to work during the winter months due to the ground being saturated and 2) the contractor's overall schedule and other constraints."	No	PacifiCorp states no engagement from developer but the Q3 Summary document states PacifiCorp and developer are in negotiations to revised milestones and there was a previously agreed to COD of 11/18/2022
Linkville Solar, LLC	OCS025: Interconnection customer did not meet early milestones, longer than expected timelines for procurement of PacifiCorp's material.	"The project is fully constructed and subscribed with participants and is experiencing interconnection delays that are expected to be resolved by Fall 2023." and "the Project was previously granted an extension to 5/17/23 pursuant to PUC Order No. 21-388 of November 3, 2021 due to delays from the utilities, Counties, and suppliers as a result of the COVID-19 impact to both labor and supply chains." and "Unfortunately, while the Project was fully constructed and ready for commercial operation on or about November of 2022, PacifiCorp has advised that they may not be able to get the fiber work done for the interconnection until September/October of 2023. The Developer is actively working to find a solution outside of the work required by PacifiCorp, which includes the use of wireless communications as an alternative. However, as recently as this week, PacifiCorp advised that while they will investigate this option, in the past they've allowed "microwave" equipment for wireless communication/transmission on certain projects but that was on a case-by-case basis. They cannot provide any guarantees as the use of wireless technologies may cause portions of the design to be reworked and potential additional costs."	Yes	
Marble Solar LLC	OCS027: Interconnection customer did not meet milestones. Lack of engagement with PacifiCorp.	"Marble Solar previously received two extensions: the first was a six-month extension that was granted due to delays related to market disruption caused by the COVID-19 pandemic and the second was due to supply chain issues caused by the US Department of Commerce investigation into imported solar panels from certain countries. The project has continued to experience supply chain delays and is expecting delivery of panels in Fall 2023. The Project Manager also cites interconnection delays outside of the developer's control as well as unexpected wetland permitting delays." and "It became clear by the Winter of 2022 that many of the critical Utility milestones in each of the Interconnection Agreements were not complete by the dates set forth therein. The Developers requested formal schedule amendments to the Interconnection Agreements in December of 2022 for each of the Projects. ... New schedules remain unavailable...While the Developers appreciate meetings that have been held with the utilities, the lack of written agreement regarding the utility timeline creates a significant risk (outside of the Developer's control)"	Yes	
McKinley Solar LLC	OCS064: Developer has requested, and PacifiCorp has agreed to delay this project beyond the current date.	"The Project Manager cites that the project has experienced development delays and needs more time to determine a construction partner." and "The Hawthorne team plans to start construction on the projects in the third quarter of 2024, following the determination and completion of an EPC Agreement with a construction partner. Since Hawthorne Renewables has not yet hired a construction partner and has undergone a merger as well as rebranding within the last few months" and "The reason for submitting the extension request for McKinley Solar in advance is due to the organization's need to finance the project in order to procure the materials necessary for construction."	No	

# Responses

Project (not interconnected)	PAC Response, OPUC Attach 3	OPUC Public Filing Narratives	Interconnection as a Cause of Delay?	Additional Information from PacifiCorp Q3 Summary Document from UM 1930
Orchard Knob Solar, LLC	OCS035: Project was sold by original developer. No engagement of new owner with PacifiCorp.	"All of these projects have executed all construction contracts, building permits, and required interconnection documents. Both projects are on track to meet their COD dates in Q1 2024 and Q2 2024, however, we are experiencing utility delays where the utility has not completed their interconnection work for both projects."	Yes	PacifiCorp states no engagement from developer but the Q3 Summary document states PacifiCorp and developer have agreed to revised milestones and there were previously agreed to CODs of 8/19/2022, 11/21/2022, 3/24/2023, 2/23/2024
Perrydale Solar LLC	OCS057: No engagement by developer.			PacifiCorp states no engagement from developer but the Q3 Summary document states PacifiCorp and developer have agreed to revised milestones and there were previously agreed to CODs of 3/3/2023, 7/21/2023
Pine Grove Solar, LLC	OCS036: Project was sold by original developer. No engagement of new owner with PacifiCorp.	"The PA's understanding is that the later August 2023 interconnection date is driven primarily by utility interconnection scheduling needs. The program has previously set a precedent that it would grant extensions for projects, when needed, to accommodate utility interconnection timelines that stretch beyond program deadlines in situations where the project is not at fault for the delay."	Yes	PacifiCorp states no engagement from developer but the Q3 Summary document states PacifiCorp and developer have agreed to revised milestones and there were previously agreed to CODs of 8/5/2022, 11/15/2022, 8/21/2023
Round Lake Solar, LLC	OCS034: Project was sold by original developer. No engagement of new owner with PacifiCorp.	"The PA's understanding is that the later August 2023 interconnection date is driven primarily by utility interconnection scheduling needs. The program has previously set a precedent that it would grant extensions for projects, when needed, to accommodate utility interconnection timelines that stretch beyond program deadlines in situations where the project is not at fault for the delay."	Yes	PacifiCorp states no engagement from developer but the Q3 Summary document states PacifiCorp and developer have agreed to revised milestones and there were previously agreed to CODs of 6/15/2022, 8/15/2022, 8/11/2023
Sunset Ridge Solar, LLC	OCS047: Current date will not be met. Project was sold by original developer. No engagement of new owner with PacifiCorp.	"The Project Manager cites interconnection utility delays pushing back the commercial operation date." and "All of these projects have executed all construction contracts, building permits, and required interconnection documents. We are experiencing utility delays pushing back our COD dates to Q1 and Q2 2024."	Yes	PacifiCorp states no engagement from developer but the Q3 Summary document states PacifiCorp and developer have agreed to revised milestones and there were previously agreed to CODs of 12/15/2022, 9/22/2023
Wood River Solar, LLC	OCS074: Current date is possible but likely to be slightly delayed based on status.	"The Wood River project is 100% subscribed and major equipment has been purchased. The Project Manager has requested an extension due to interconnection delays." and "This project was originally supposed to come online in November 2023. The project is 100% subscribed and major equipment (modules and transformers) has been purchased. Wood River has experienced interconnection delays and the Commercial Operation Date has been pushed to 2024."	Yes	

# Harms from Delays

- Defaults in financing, increased costs to finance, mistrust from lenders, etc.
- Lost revenues
- Customers not receiving bill credits, which is especially harmful to low-income customers
- Reputational harm to developers, the community solar program, developing in Oregon, and the utilities and OPUC



# UM 2111 Schedule

- Group 1: Screen modernization; incorporating IEEE 1547-2018; incorporating advanced inverters, storage, islanding, etc.; access to transparent data, standards and assumptions, etc.
  - Started on 4/22/2022 (scoping order) and finished on 8/30/2023 (order to move to AR 659)
- Group 2: Interconnection request process, construction process, remedies for utility and generator violations, requirement for nondiscriminatory good faith actions
- Group 3 (cost allocation): Assigning system upgrades between generators and other system beneficiaries; assigning interconnection upgrades for renewing QFs; any other cost issues
- Group 4 (generator's ability to manage costs): Generator's ability to perform studies and construct upgrades; access to efficient, effective dispute resolution processes; limits on upgrade costs or deviations from estimates; clarity on material changes, multiple POIs, downsizing, and aggregation
- Group 5 (rule structure): 10-20 MW generators, whether to consolidate rules between the NEM, SGIP, and LGIP

# Recommendations

- Allow interconnection customers to hire third parties to complete interconnection work
- Direct PacifiCorp and other utilities to hire more employees to complete interconnections
- Ensure that there are no arbitrary contractual impediments in the Commission-approved interconnection agreements that might prevent developers from recovering all lawfully available damages for delays or breaches of an interconnection agreement
- Increased transparency between a utility, the interconnection customer, PUC Staff, and CSP Staff, including but not limited to standardization and better invoice breakdown
- Performance based rate making and service quality standards for interconnection in the form of performance metrics and penalties/higher return