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Via Electronic Mail

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Re: OPUC Docket No. UM 2118

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Attached for filing in the above-captioned docket is *Sunthurst Energy, LLC's Reply Brief*.

Thank you in advance for your assistance.

Sincerely,

A handwritten signature in black ink that reads "Ken Kaufmann". The signature is written in a cursive style and is followed by a horizontal line.

Ken Kaufmann
Attorney for Sunthurst Energy, LLC

Attach.

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BEFORE THE PUBLIC UTILITY COMMISSION OF OREGON
DOCKET NO. UM 2118

<p>Sunthurst Energy, LLC</p> <p>Complainant,</p> <p>vs.</p> <p>PacifiCorp dba Pacific Power</p> <p>Respondent.</p>	<p>Sunthurst Energy, LLC's Reply Brief</p>
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I. OVERVIEW OF SUNTHURST'S REBUTTAL

PacifiCorp's Opening Brief marks at least the fifth time PacifiCorp claims it has arrived at the "minimum requirements"¹ for interconnecting Sunthurst's 1.98 MW Pilot Rock Solar 1 (PRS1) and 2.99 MW Pilot Rock Solar 2 (PRS2) projects, and cannot lower costs any more. Each time, after additional evaluation by PacifiCorp and Sunthurst, PacifiCorp has further reduced the scope and cost of interconnection. Through its (protracted, tedious, and expensive) efforts, Sunthurst has caused PacifiCorp to reduce its estimated costs to interconnect PRS1 and PRS2, from \$2,000,000, in early 2020, to approximately \$860,000 today.² In pressing PacifiCorp to defend its requirements, Sunthurst has performed a service to the state, by testing the (sometimes) arbitrary policies, assumptions and requirements of Oregon small generator interconnections and demonstrating that great reduction to costs of small generator interconnection are possible.

Negotiations have not been a one-way affair. While PacifiCorp has come a long way towards Sunthurst's position on many issues, Sunthurst has made many concessions to PacifiCorp as well. Sunthurst dropped its objections to costly Direct Transfer Trip relay protection after PacifiCorp provided a reasoned justification. Sunthurst also dropped its objection to PacifiCorp's requirements of dead-line checking. And Sunthurst has dropped its request that PacifiCorp allow it to self-build the interconnection facilities. A detailed list of resolved issues was provided on pages 4-6 of Sunthurst's Opening Brief.

¹ PacifiCorp's Opening Brief, at 13, line 1.

² PacifiCorp's Opening Brief, at 12, line 19. (The cost, above, does not include approximately \$75,000 in costs addressed in telemetry related costs to be incurred by Sunthurst, and discussed in Section III(C) of this Reply).

What remains are the issues the Parties have failed to compromise. PacifiCorp, in some instances, has eschewed discernment in favor of dogma. In other cases, it seeks to continue to enjoy what it has always enjoyed, where its decisions have escaped review for too long. In this Reply Brief, Sunthurst rebuts PacifiCorp's arguments why the scope and cost to Sunthurst to interconnect PRS1 and PRS2 should not be reduced further, and renews its prayer for relief from its Opening Brief.

II. PACIFICORP HAS THE BURDEN OF SHOWING ITS TERMS ARE REASONABLE.

PacifiCorp asserts Sunthurst bears the burden of proving that a term or condition of interconnection that is not specified in the rules or PacifiCorp's compliance filing is unjust and unreasonable.³ To Sunthurst's knowledge, this is a matter of first impression before this Commission; however the substance of PacifiCorp's assertion was rejected by FERC, in similar disputes regarding the reasonableness of negotiated terms in Large Generator Interconnection Agreements (LGIAs) subject to FERC jurisdiction.

In *Southern Company Services, Inc.*, interconnection customer Longleaf Energy Associates, LLC (Longleaf), and Southern Company Services (Southern) were unable to reach agreement on the terms and conditions in the appendices of their LGIA.⁴ Longleaf asserted that the public utility had the burden of proof under Section 205 of the Federal Power Act to show rates and charges in the Appendices to the LGIA (but not in the

³ PacifiCorp's Opening Brief, at 12.

⁴ *Southern Company Services, Inc.* 116 F.E.R.C. P61,231, 61939-61940, 2006 FERC LEXIS 2055, *16 (F.E.R.C. September 8, 2006).

Commission approved *pro forma* LGIA) are just and reasonable.⁵ FERC agreed with Longleaf that the utility bore the burden of proof:

26. As a preliminary matter, we agree that a particular appendix that parties have negotiated in accordance with section 11.2 of the *pro forma* LGIP is not presumed to be just and reasonable. Unlike the provisions of an interconnection agreement that conform to the *pro forma* LGIA, *such appendices must be shown to be just and reasonable under section 205 of the FPA.*

116 F.E.R.C. P61,231, 61940 (emphasis added).

In *Midwest Independent Transmission System Operator, Inc.*⁶, which also concerned, among other issues, the reasonableness of negotiated terms not specified in the utility's LGIA, FERC reiterated the rule of *Southern Company Services, Inc.*:

12. In contrast [to a transmission provider seeking a deviation from its *pro forma* interconnection agreement], *provisions that are to be negotiated between the parties must be shown to be just and reasonable under section 205 of the FPA.* The *pro forma* Interconnection Agreement does not dictate the terms and conditions of every provision, allowing certain provisions to be negotiated by the parties. The just and reasonable standard applies unless the *pro forma* Interconnection Agreement sets forth a more specific standard.

⁵ *Id.* at ¶25. ("Longleaf also requests a number of substantive changes to the appendices to the LGIA. Longleaf asserts that, because these provisions are not in Southern's *pro forma* LGIA, they do not enjoy the same deference afforded to other provisions of the LGIA. Longleaf states that section 11.2 of the *pro forma* LGIP generally leaves matters relating to the appendices to negotiations between [*61940] the transmission provider and the interconnection customer. In addition, Longleaf states that in proposing the rates, terms and conditions contained in the appendices, the public utility has the burden of proof under section 205 of the FPA to show that the increased rate or charge is just and reasonable.").

⁶ 116 F.E.R.C. P61,252, 62005, 2006 FERC LEXIS 2098, *9 (F.E.R.C. September 18, 2006).

116 F.E.R.C. P61,252, 62005, 2006 FERC LEXIS 2098, *9 (F.E.R.C. September 18, 2006) (emphasis added).

Southern Company Services, Inc., and *Midwest Independent Transmission System Operator, Inc.*, which are settled law, make clear that, for FERC-jurisdictional interconnections, the utility bears the burden to show that rates and charges *not in the pro forma* interconnection agreement are reasonable unless the *pro forma* Interconnection Agreement sets forth a more specific standard. The question then becomes whether the same standard should apply to state-jurisdictional interconnections regulated by this Commission. For the reasons below, the answer is “yes.”

The Commission regulates interconnections where a qualifying facility seeks to interconnect to sell all of its net output to the interconnecting utility. Sunthurst is such a qualifying facility (or “QF”). PURPA⁷ requires the QF to pay interconnection costs determined in accordance with the state’s rules (as long as those rules are non-discriminatory).⁸

The Commission promulgated rules (codified at OAR 860, Division 82 and Division 29) governing interconnection of small generating facilities, and qualifying facilities, respectively.⁹ Those rules require that interconnection requirements be: reasonable in scope; reasonable in cost; and nondiscriminatory:

⁷ Public Utility Regulatory Policies Act of 1978 (P.L. 95-617).

⁸ 18 CFR 292.306.

⁹ ORS 758.505 to 758.555 provide Oregon’s statutory scheme for rate regulation of PURPA purchases and interconnections. (See Order No. 10-132, at 6, in Docket No. UM 1401). ORS 758.535(2)(a) states that “The

- OAR 860-082-0035(1), Study Costs, provides in part “Whenever a study is required under the small generator interconnection rules, the applicant must pay the public utility for the *reasonable* costs incurred in performing the study.” (Emphasis added).
- OAR 860-082-0035(2), Interconnection facilities, provides in part “The applicant must pay the *reasonable* costs of the interconnection facilities.” (Emphasis added).
- OAR 860-082-0035(3), Interconnection equipment, provides in part that “An applicant or interconnection customer must pay all expenses associated with constructing, owning, operating, maintaining, repairing, and replacing its interconnection equipment. Interconnection equipment is constructed, owned, operated, and maintained by the applicant or interconnection customer.
- OAR 860-082-0035(4), System upgrades, provides in part “The applicant must pay the *reasonable* costs of any system upgrades”. (Emphasis added).
- OAR 860-082-0005(4) provides that “A small generator facility that qualifies as a ‘small power production facility’ under OAR 860-029-0010(25) must also comply with the rules in OAR chapter 860, division 029. If there is a conflict between the small generator interconnection rules and the rules in OAR chapter 860, division 029, then the small generator interconnection rules control.”
- OAR 860-029-0060(1) provides in part that “interconnection costs that may *be reasonably incurred* by the public utility will be assessed against a qualifying facility on a *non-discriminatory basis* with respect to other customers with similar load or other cost-related characteristics.” (Emphasis added).

terms and conditions for the purchase of energy or energy and capacity from a qualifying facility shall: (a) be established by rule by the commission if the purchase is by a public utility.”

- OAR 860-029-0060(2) provides in part that “the public utility will be reimbursed by the qualifying facility for any *reasonable* interconnection costs.” (Emphasis added).
- OAR 860-029-000(10)(9) provides that “Costs of interconnection” means the *reasonable* costs of connection, switching, dispatching, metering, transmission, distribution, equipment necessary for system protection, safety provisions and administrative costs incurred by an electric utility directly related to installing and maintaining the physical facilities necessary to permit purchases from a qualifying facility. (Emphasis added).

The reasonableness requirement permeates the Division 082 and Division 029 rules. Every aspect of the interconnection costs incurred by the utility and recovered from the applicant (study, scope, construction, and operation) must be reasonable.

Upon adopting the Division 082 small generator interconnection rules, in Docket No. AR-521, the Commission ordered the utilities to file draft forms and agreements, and to secure Commission Staff’s agreement that the final versions of those forms and agreements conform to the Division 082 rules.¹⁰ The Commission approved PacifiCorp’s *pro forma* forms and agreements, on September 8, 2009.¹¹ However none of the terms Sunthurst is disputing in its Complaint were set forth in PacifiCorp’s *pro forma* agreements.

Under FERC’s framework, terms of a FERC-approved *pro forma* agreement are presumed to be just and reasonable. Therefore, an interconnection applicant seeking to challenge them bears the burden of proof when claiming they are unreasonable. However,

¹⁰ Order No. 09-196, at 6 (June 8, 2009).

¹¹ Order No. 09-350 at 2.

if the term being challenged is not part of the approved *pro forma* agreement, then the utility bears the burden to show that the term is reasonable, because FERC has not previously reviewed and approved the term. This is the framework described in FERC's holdings in *Southern Company Services, Inc.*, and *Midwest Independent Transmission System Operator, Inc.* discussed above. Under the FERC framework, the burden of proof clearly lies with PacifiCorp (were this complaint before FERC).

Although Sunthurst found no Commission decision stating which party bears the burden of proof in a challenge to the reasonableness of terms of interconnection *not* specified in a *pro forma* agreement, there is no apparent reason why the Commission would deviate from FERC's standard, after having mirrored FERC's interconnection framework so closely in other respects. FERC's framework is consistent with a fundamental premise of regulated utility rates--that a utility bears the initial burden to prove its terms of service are just and reasonable.¹² At its essence, PacifiCorp's design, construction, and operation of Sunthurst's interconnection is a retail service provided by a regulated monopoly, and deserves regulation as such. Furthermore, as a practical matter, asking an applicant (who usually has limited resources and always has limited access to knowledge and information a utility possesses about its rates) to prove a rate is unreasonable puts a heavy burden on the party that is less well-positioned to make such a case.

¹² ORS 756.040 expressly delegates to the Commission the duty to protect all customers of regulated utilities "from unjust and unreasonable exactions and practices and to obtain for them adequate service at fair and reasonable rates." ORS 757.210(1) provides that the Commission may conduct a hearing on any rate request to determine whether the rate or schedule is "fair, just and reasonable." The statute further provides that the utility bears the burden at the hearing of showing that the proposed rate "is fair, just and reasonable," and that the Commission "may not authorize a rate or schedule of rates that is not fair, just and reasonable." Finally, ORS 757.020 states that any charges for electric utility service "shall be reasonable and just, and every unjust or unreasonable charge for such service is prohibited." *Wah Chang v. PacifiCorp*, 2009 Ore. PUC LEXIS 291, *94 (Or. P.U.C. September 2, 2009)(Comm. Savage, dissent).

For all the reasons above, in disputes over the reasonableness of a term or condition of interconnection *not* part of a *pro forma* agreement, the utility should bear the burden of proof, in Oregon-, as well as FERC-, jurisdictional interconnections.

III. REMAINING ISSUES IN THIS COMPLAINT

A. Cost Liability for Branch Regulators

1. Sunthurst's Rebuttal Argument

a. **PacifiCorp bears the burden of proving branch regulators are reasonable.**

Sunthurst is required to pay PacifiCorp the reasonable cost of installation of branch regulators,¹³ *provided that* branch regulators are a reasonable requirement¹⁴ and required on a non-discriminatory basis with respect to other customers with similar load or other cost-related characteristics¹⁵. Because PacifiCorp's requirement for branch regulators is not part of its *pro forma* interconnection agreements filed with the Commission, PacifiCorp bears the burden of proving that they are a reasonable requirement of Sunthurst.

b. **PacifiCorp's assertion that branch regulators do not redress an existing problem¹⁶ is undermined by its unreasonable failure to preserve probative evidence.**

Without prompting, PacifiCorp stated on a call with Sunthurst held June 9, 2020, that then-existing voltages on circuit 5W406 were outside of ANSI Range A criteria.¹⁷

¹³ OAR 860-082-0015(34) ("System upgrade" means an addition or modification to a public utility's transmission or distribution system or to an affected system that is required to accommodate the interconnection of a small generator facility."); OAR 860-082-0035(4) ("The applicant must pay the *reasonable* costs of any system upgrades").

¹⁴ OAR 860-029-0060(1).

¹⁵ OAR 860-029-0060(1)

¹⁶ PacifiCorp's Opening Brief, at 15, line 10.

PacifiCorp's assertion in its Opening Brief that voltage regulators are not required to "redress an existing problem in the Pilot Rock *substation*"¹⁸ does not expressly deny Mr. Hale's testimony that PacifiCorp admitted existing voltage issues on circuit 5W406. And PacifiCorp cites no evidence to support its claim. Sunthurst explained in its Opening Brief, pp 12-14, how PacifiCorp unreasonably failed to preserve any records from the June 9 call, which could have provided important information relevant to the need for branch regulators, although Sunthurst provided its corroborating notes from the call to PacifiCorp.

PacifiCorp also improperly disposed of the studies it conducted while preparing the System Impact Study Report for PRS2. Sunthurst had a right to see not just the study conclusions but also the supporting documentation--all of which Sunthurst has paid for.¹⁹ PacifiCorp's loss of the detailed studies, which it had a duty to share with Sunthurst, deprived Sunthurst of information that may well have undermined PacifiCorp's stated rationale for branch regulators. If PacifiCorp's assertion that "Sunthurst has failed to provide a reasonable basis to support its conjecture"²⁰ turns out to be correct, it was not for lack of effort on the part of Sunthurst.

¹⁷ Sunthurst/300, Hale/6, lines 18-20.

¹⁸ PacifiCorp's Opening Brief, at 15, lines 9-11.

¹⁹ See *Small Generator Interconnection Agreements*, 145 F.E.R.C. P61,159, 61920, 2013 FERC LEXIS 1966, *171, 2013 WL 6360657 (F.E.R.C. November 22, 2013) ("FERC Order 792")(" 204. The Commission agrees with SEIA that the Interconnection Customer is entitled to view the facilities study supporting documentation because it is funding the study.")

²⁰ PacifiCorp's Opening Brief, at 15, line 11.

c. PacifiCorp's assertion that it does not need to study voltage regulators invites unreasonable conditions and discriminatory treatment.

PacifiCorp's Opening Brief asserts that "After PRS2 interconnects, PacifiCorp cannot implement CVR without additional [branch] voltage regulators."²¹ This is a problematic assertion because, as explained on page 11 of Sunthurst's Opening Brief, PacifiCorp uses subjective criteria to determine how much distributed generation a circuit using CVR can tolerate. But even if PacifiCorp's assertion is assumed to be correct, it does not follow that no study is needed to determine whether branch regulators are required.

PacifiCorp's assertion that no study is required ignores the fact that alternatives to branch voltage regulation exist, which may be so much better as to make voltage regulators an unreasonable choice. Sunthurst described five widely applied alternatives to voltage regulators in its Opening Brief, and noted that branch regulators are typically a last resort due to their high cost.²²

PacifiCorp's assertion that no study is required runs contrary to its own Engineering Handbook (Handbook). Sunthurst learned about the Handbook during discovery, when PacifiCorp stated that it uses the standards in its Pacific Power Engineering Handbook.²³ An

²¹ PacifiCorp's Opening Brief, at 17, lines 2-3.

²² Sunthurst's Opening Brief, at 8-10 (The five alternatives cited are: fixed voltage regulation, re-conductoring, the addition of capacitor banks, and reconfiguring of circuits, with branch regulators being a last resort due to their expense). *Id.*

²³ Sunthurst/401, Beanland/103-104 (PacifiCorp's response to Sunthurst Data Request 10.4(d)).

excerpt from Section 7.8 of PacifiCorp's Handbook²⁴, stating the standard for assessing voltage conditions and redress, is provided below:

7.8. Voltage Analysis

All distribution system studies require voltage analysis, which consider the following:

1. high and low voltage
2. tap zones or voltage spread
3. voltage balance
4. available voltage regulation
5. installed capacitors

Typically the voltage analysis will be done by a computer program such as FeederAll. When the analysis is done, voltage problems are identified per company standards, and solutions are compared on an economic basis.

In order to meet company standards during normal operation, the FeederAll model should typically have the node low voltage limit set at .97 p.u. and the node high voltage limit set at 1.04 p.u. In areas where tapped transformers are used, the node low voltage limit can be set to .95 p.u.

The voltage is modeled on the primary system, and is the annual high and low for all of the locations in the area. The area should be modeled under at least three loading conditions:

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Section 7.8 says that “all” distribution system studies require voltage analysis so that “voltage problems are identified *per company standards*, and solutions are *compared on an economic basis*.” PacifiCorp ignored Section 7.8. Because it performed no study, it did not determine whether voltage problems exist per any defined standard, did not identify alternatives, and made no comparison of alternatives on an economic basis. Any one of these three omissions is sufficient basis to find PacifiCorp has not carried its burden.

²⁴ Sunthurst/500, Beanland/27.

d. PacifiCorp’s assertion that “Commission guidance” supports its use of Conservation Voltage Reduction (CVR) is flawed.

PacifiCorp’s Opening Brief cites two Commission orders in support of its assertion that the Commission wants utilities to expand CVR capabilities.²⁵ Neither order, however, endorses use of CVR *without economic study*. One of the orders PacifiCorp cites, Order 15-053, approves a CVR policy program for the express purposes of “validating savings associated with CVR”, “quantifying costs and benefits associated with CVR”, and “determining methods for ongoing measurement and validation of CVR effectiveness”.²⁶ The orders PacifiCorp cites actually support Sunthurst’s argument that CVR, being an efficiency upgrade, should be utilized in a verifiable, cost-effective manner. PacifiCorp made no attempt to show that branch regulators, at a cost of about \$180,000, (a) have benefits commensurate to costs; or (b) are cheaper than other alternatives.

e. PacifiCorp’s assertion that Customer Indifference requires installation of branch regulators is *ipse dixit*.²⁷

PacifiCorp’s utterance of “customer indifference” 10 times in its brief does not justify its positions. PacifiCorp must show its decisions are reasonable. In this case, instead of attempting to show that branch regulators, at a cost of \$180,000, are reasonable, in isolation and compared to other alternatives, PacifiCorp utters “customer indifference” as though it is a talisman absolving it of responsibility to exercise reasonable judgment.

²⁵ PacifiCorp’s Opening Brief, at 14, lines 10-11.

²⁶ Order No. 15-053, App’x A at 6.

²⁷ *Ipse dixit* is an assertion without proof, or a dogmatic expression of opinion. The fallacy of defending a proposition by baldly asserting that it is “just how it is” distorts the argument by opting out of it entirely: the claimant declares an issue to be intrinsic, and not changeable. Wikipedia.

Customer Indifference does not mean zero impact is allowed. Every change to PacifiCorp's system, by definition, *changes it*. As an example, PacifiCorp's Engineering Handbook, describes how shifting load from one circuit to another may impact reliability:

A change in the system configuration also changes the reliability to the customers affected by the load transfer. An example is increasing the number of momentary operations by transferring a rural area with high tree exposure to a suburban residential area.

Sunthurst/500, Beanland/21. PacifiCorp's Engineering Handbook recognizes that transfer of load between circuits may make one circuit less reliable than before. But it does not require that the effect be eliminated; rather the Handbook requires an engineering analysis, and may allow such a change provided the effects are reasonable.²⁸

In the case of branch regulators, PacifiCorp would spend \$180,000 (of Sunthurst money) solely to eliminate claimed but unquantified efficiency losses on a single feeder. Not only does PacifiCorp make no attempt to quantify those losses, it also would disregard all offsetting reductions in losses due to PRS1 and PRS2. Those reductions include reduced transformer losses and reduced transmission losses resulting from local generation displacing distant generation to serve local load. So while PacifiCorp may be correct that PRS1 and PRS2 impact system losses, we don't know if the net impact is positive or negative, and uttering "customer indifference" does not excuse the lack of any analysis.

²⁸ See Engineering Handbook, Section 7.8, *supra*.

f. PacifiCorp's requirement that Sunthurst pay for branch regulators is unreasonable.

(Except for whether PacifiCorp despoiled material evidence of a pre-existing condition requiring branch voltage regulators) the material facts are not in dispute. PacifiCorp admits that: (a) PacifiCorp did not provide Sunthurst supporting documentation or detailed study results for the PRS2 System Interconnection Study Report²⁹; (b) PacifiCorp does not have a specific defined standard for determining when branch regulators are required³⁰; (c) PacifiCorp did not quantify the net or gross efficiency benefits of branch voltage regulators;³¹ and (d) PacifiCorp did not consider any other alternative to branch voltage regulators.³²

Given PacifiCorp's refusal to apply objective technical or economic standards for the use of branch regulators, its not surprising that PacifiCorp's requirement of branch regulators in Oregon Community Solar Interconnections is irregular--confined to one small corner of PacifiCorp's Oregon service territory.³³ PacifiCorp's lack of studies and lack of objective standards make it impossible to determine how much losses branch regulators will avoid, whether those losses may be avoided using a more economic alternative, and whether they are required consistently under similar conditions. In short, the reasonableness of its requirement cannot be determined. Therefore, PacifiCorp cannot

²⁹ See Sunthurst's Opening Brief, page 13, note 30.

³⁰ PacifiCorp's Opening Brief, at 17, lines 5-11.

³¹ PacifiCorp's Opening Brief, at 15, lines 19-20. ("Sunthurst further claims that PacifiCorp has not provided a study to demonstrate that the voltage regulators are necessary. Sunthurst's argument, however, misunderstands the need for the voltage regulators. PacifiCorp does not need a study to know that it currently uses LDC settings to efficiently regulate voltage on the feeder").

³² *Id.*

³³ See Sunthurst's Opening Brief, at 12.

carry its burden to show that its requirement of branch regulators for the sole alleged purpose of maintaining optimal voltage, at a cost of \$180,000, is reasonable.

2. Requested Remedy

Sunthurst reaffirms its request, on page 14 of its Opening Brief, for an Order declaring that Sunthurst is not required to pay for branch regulators as a condition to interconnecting PRS1 or PRS2.

B. Cost Liability for Fiber Optic Communications Link

1. Sunthurst's Rebuttal Argument

a. PacifiCorp has the burden to show its required fiber optic communications link is reasonable.

Sunthurst is required to pay PacifiCorp the reasonable cost of installation of fiber optic link to enable its relay protection scheme,³⁴ *provided that* fiber optic is a reasonable requirement³⁵ and required on a non-discriminatory basis with respect to other customers with similar load or other cost-related characteristics³⁶. Because PacifiCorp's requirement for fiber optic link is not part of its *pro forma* interconnection agreements filed with the Commission, PacifiCorp bears the burden of proving that they are a reasonable requirement of Sunthurst.

³⁴ OAR 860-082-0015(34) ("System upgrade" means an addition or modification to a public utility's transmission or distribution system or to an affected system that is required to accommodate the interconnection of a small generator facility."); OAR 860-082-0035(4) ("The applicant must pay the *reasonable* costs of any system upgrades").

³⁵ OAR 860-029-0060(1).

³⁶ OAR 860-029-0060(1)

b. PacifiCorp's insistence on fiber optic cable is not reasonable.

Sunthurst's Opening Brief explains how PacifiCorp's analysis depends on the faulty premise that the cost of fiber is comparable to the cost of spread spectrum radio.³⁷ Sunthurst's two consulting engineers stated that spread spectrum radio costs less than fiber optic.³⁸ PacifiCorp's own calculations show that radio is likely to cost \$14,000 less than fiber optic.³⁹ PacifiCorp argues that fiber is a reasonable choice over radio where the costs to install the two are comparable. However the costs are not comparable; therefore, PacifiCorp's primary rationale fails. PacifiCorp's alternative rationale--that fiber optic is more reliable--is speculative, and is controverted by the fact that PacifiCorp routinely specifies spread spectrum radio in interconnections similar to Pilot Rock Solar 1 and 2.⁴⁰

c. PacifiCorp's claim that a fiber optic cable meets the "but-for" test is wrong.

Under PacifiCorp's version of the "but for" test, the interconnection customer bears the costs of network upgrades that "would not be needed but for the interconnection of its generating facility." Fiber link fails the "but for" test, because it is not needed for the interconnection so long as a cheaper alternative--spread spectrum radio link--is installed.

³⁷ Sunthurst's Opening Brief, at 16-17 (explaining that PacifiCorp's estimators juggled their numbers during the pendency of the Complaint to arrive at revised cost figures supporting its legal argument).

³⁸ Sunthurst/211, Beanland/13 (Larry Gross); Sunthurst/200, Beanland/29, lines 12-13 (Michael Beanland).

³⁹ PAC/200, Patzkowski-Taylor-Vaz/24, lines 13-14 ("At the pre-existing \$60,000 per mile estimate, the fiber optic cable option was approximately \$14,000 more than the radio.).

⁴⁰ See, Sunthurst's Opening Brief, at 15, note 32 (citing examples of spread spectrum radio specified by PacifiCorp in Oregon CSP interconnections).

PacifiCorp's (real) primary reason for requiring fiber is to provide a communication link for its Pilot Rock solar telemetry system.⁴¹ Although PacifiCorp is precluded by OAR 860-082-0070 from charging Sunthurst for telemetry (as explained in Sunthurst's Opening Brief, pp. 25-28), PacifiCorp intends to install telemetry at PRS1 and PRS2 at its own cost. That telemetry system cannot function using spread spectrum radio, but can function using fiber optic, which can accommodate the more intensive data transmission associated with telemetry. PacifiCorp intends to make Sunthurst use fiber link instead of radio for its transfer trip communications link so that PacifiCorp can use excess capacity of the fiber link for its telemetry communications. In other words, fiber optic is not needed *but for* PacifiCorp's installation of telemetry, because otherwise radio is the less expensive and reasonable option. Because OAR 860-082-0070 precludes telemetry as part of the PRS1/PRS2 "interconnection facilities", PacifiCorp's assertion that fiber optic is required for the interconnection of PRS1 and PRS2 is wrong.

d. PacifiCorp's fiber optic requirement violates the intent of the Division 82 rules.

In Docket No. AR 521, the Commission adopted rules for small generator interconnections, codified at OAR 860, Division 82. The Commission rejected generators' request for express rules permitting cost sharing between applicants or between an applicant and the utility, because reimbursing applicants through bill credits was deemed

⁴¹ Sun/200, Beanland/29, lines 7-13 ("The fiber optic cable from the substation to the project specified for the direct transfer trip (DTT) system is also being used to link the remote terminal unit installed by PacifiCorp at the project. In fact, the RTU requires the higher data speeds and bandwidth provided by the fiber; the DTT system can reliably function using the slower spread-spectrum radio. With no requirement for a data-intensive RTU at the project, the fiber optic system could be replaced by a spread-spectrum radio system at likely lower cost.").

infeasible *and because the rules were intended to prevent a public utility from requiring a small generator to pay for system upgrades that primarily benefit the utility.*⁴² In other words, if a system upgrade primarily benefits the utility, then it should not be charged to the interconnection applicant.

Applying the above rule to the facts of this Complaint, it is clear that PacifiCorp should pay for fiber because spread spectrum radio can adequately provide the communication link required for PRS1/PRS2 relay protection, and radio costs substantially less than fiber. If PacifiCorp requires fiber for the relay protection, and then uses the same fiber equipment to serve its telemetry system, it is requiring Sunthurst to pay for system upgrades that primarily benefit the utility--in contravention of the Division 82 rules.

2. Requested Remedy

For all the reasons set forth in its Opening Brief, Sunthurst reaffirms its prayer for relief on page 21 of its Opening Brief. It asks the Commission to order PacifiCorp to cap Sunthurst's costs for relay-protection communications at the cost of a radio link or, alternatively, order PacifiCorp to pay half of the cost of fiber optic link, or, alternatively, order PacifiCorp to pay all the cost of fiber optic link, and lease excess capacity in the fiber optic link to Sunthurst for its relay-protection communications link.

⁴² *The proposed rules, however, include language that is meant to strictly limit a public utility's ability to require one small generator facility to pay for the cost of system upgrades that primarily benefit the utility or other small generator facilities, or that the public utility planned to make regardless of the small generator interconnection. Under the proposed rules, 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.*

Order 09-196, at 5 (emphasis added).

C. Cost Liability for Telemetry-Related Costs

1. Summary of Sunthurst's and PacifiCorp's Contentions.

Sunthurst asserted in its Opening Brief that, because neither PRS1 nor PRS2 has a nameplate capacity greater than the 3 MW, OAR 860-082-0070 prohibits PacifiCorp from imposing telemetry related charges on PRS1 and PRS2. Sunthurst cited the Commission's order adopting the rule, which stated that the bright line rule captures the appropriate delineation of telemetry costs.

PacifiCorp *admits that rule OAR 860-082-0070(1)(2) does not allow a utility to require telemetry for projects with less than 3 MW of nameplate capacity.*⁴³ However PacifiCorp claims that PRS1 and PRS2 "should be evaluated as a single 4.97 MW facility under [OAR 860-82-0025(4)] and Policy 138."⁴⁴

2. Sunthurst's Rebuttal Argument

a. Policy 138 does not govern allocation of telemetry costs.

In an apparent reaction to Sunthurst's Complaint, PacifiCorp revised its interconnection Policy 138, on December 20, 2020, and now cites it in support of its position. Changes to Policy 138 effective December 20, 2020 specify that generators connected to a common point of delivery require telemetry when their nameplate ratings aggregate to 3 MW or more. Prior to December 20, 2020, the Policy 138 contained no such

⁴³ PacifiCorp's Opening Brief, at 27, lines 10-11 ("The Commission's small generator interconnection rules do not allow a utility to require telemetry for projects with less than 3 MW of nameplate capacity.").

⁴⁴ PacifiCorp's Opening Brief, at 28, lines 3-4.

requirement. PacifiCorp never, prior to its Opening Brief, informed Sunthurst of the rule change, nor asserted it applied to PRS1/PRS2.

Regardless the unfairness of PacifiCorp's attempt to bootstrap its position with a secret new policy, PacifiCorp's interconnection policies cannot contravene any requirement in the Oregon Administrative Code, including OAR 860-082-0070(1)(2), *which PacifiCorp has admitted does not allow a utility to require telemetry for projects with less than 3 MW of nameplate capacity.*

b. OAR 860-82-0025(4) does not govern allocation of telemetry costs.

PacifiCorp seeks to circumvent the direct prohibition in OAR 860-082-0070(1)(2), for the first time in its Opening Brief, by proposing a very strained interpretation of OAR 860-082-0025(4).

OAR 860-082-0025(4) states:

If an applicant proposes to interconnect multiple small generator facilities to a public utility's transmission or distribution system at a single point of interconnection, then the public utility must evaluate the applications based on the combined total nameplate capacity for all of the small generator facilities. If the combined total nameplate capacity exceeds 10 megawatts, then the small generator interconnection rules do not apply.

The rule 0025(4) does not specify the meaning of "evaluate", however it is clear from the last sentence of the rule, above, that the applications are "evaluated" together to determine

whether they aggregate in excess of 10 MW, which PRS1 and PRS2 do not. Nothing in the paragraph suggests it applies generally to the other Division 82 rules.

Further, the rule does not reasonably apply to applications separated in time by more than three years. Initially, Sunthurst intended to develop only PRS1. It applied for interconnection in 2015. PacifiCorp assigned that application queue number Q0666 and issued a System Impact Study (SIS) report on August 14, 2015.⁴⁵ In 2016, Sunthurst submitted an application for PRS2 with 6 MW nameplate capacity. PacifiCorp assigned that application Q0747, and issued a SIS report on July 27, 2016.⁴⁶ Sunthurst withdrew Q0747 after PacifiCorp estimated the cost to interconnect would be \$ 42,199,000.00. In August 2018, Sunthurst submitted a revised application for PRS2 with 2.99 MW nameplate capacity. PacifiCorp assigned that application Q1045, and issued a SIS report on March 27, 2020.⁴⁷

Whatever OAR 860-82-0025(4) does mean, the suggestion that it required PacifiCorp to require telemetry for Q1045 in 2020 because of the Q0666 application in 2015, is both a contorted reading of the language and unfair to Sunthurst, who has relied on the rules when endeavoring to build its projects.

c. PacifiCorp’s allegation that Sunthurst engaged in “obvious gaming” is patently untrue.

⁴⁵ Sunthurst/205, Beanland/1.

⁴⁶ Sunthurst/206, Beanland/1.

⁴⁷ Sunthurst/207, Beanland/1.

PacifiCorp allegation of “Sunthurst’s obvious gaming of the interconnection rules to try to avoid costs for telemetry” is untrue.⁴⁸ According to the Oxford English Dictionary, the verb “gaming” means to “manipulate (a situation), typically in a way that is unfair or unscrupulous.” Sunthurst applied for a 2 MW interconnection in 2015, a 6 MW project in 2016, and a 2.99 MW project in 2018. Each was an independent act, not part of any scheme to manipulate the rules. PacifiCorp presents no evidence to the contrary. Sunthurst’s only goal was, and remains, to interconnect to PacifiCorp at reasonable cost. PacifiCorp either doesn’t know what “gaming” means, or ascribes a different definition than that of the Oxford English Dictionary.

3. Remedy Requested.

Because PacifiCorp has admitted OAR 860-082-0070 does not permit it to collect *any* costs associated with telemetry from Sunthurst, and because PacifiCorp’s collateral attacks on that express prohibition lack merit, Sunthurst reaffirms its request for relief, on page 29 of its Opening Brief, which has an estimated benefit to Sunthurst of \$75,000.

D. Cost Liability for High-side Project Meters

1. Sunthurst’s Rebuttal Argument

- a. PacifiCorp has the burden to prove high-side metering, at an added cost of \$25,000, is reasonable.**

⁴⁸ PacifiCorp’s Opening Brief, at 28, lines 4-5.

Sunthurst is required to pay PacifiCorp the reasonable cost of installation of metering on the high side of each project transformer,⁴⁹ *provided that* high side metering is a reasonable requirement⁵⁰ and required on a non-discriminatory basis with respect to other customers with similar load or other cost-related characteristics⁵¹. Because PacifiCorp’s requirement for high side metering is not part of its *pro forma* interconnection agreements filed with the Commission, *PacifiCorp* bears the burden of proving it is a reasonable requirement of Sunthurst.

b. PacifiCorp did not disclose its use of low-side metering until its direct testimony.

Sunthurst first questioned the need for high-side metering in a July 23, 2020 letter to PacifiCorp.⁵² In its August 7, 2020 response, PacifiCorp stated “Sunthurst’s request to install the project meters on the low side of Sunthurst’s step up transformers is also inconsistent with PacifiCorp’s policy and *all other similarly situated interconnection requests.*”⁵³ Sunthurst raised the issue again in its Complaint.⁵⁴ During discovery, however, PacifiCorp asserted to Sunthurst, on December 9, 2020, that “no generator interconnecting today would be allowed to use a low-side metering configuration.”⁵⁵ In reliance on

⁴⁹ OAR 860-082-0015(34)(“System upgrade” means an addition or modification to a public utility’s transmission or distribution system or to an affected system that is required to accommodate the interconnection of a small generator facility.”); OAR 860-082-0035(4) (“The applicant must pay the *reasonable* costs of any system upgrades”).

⁵⁰ OAR 860-029-0060(1).

⁵¹ OAR 860-029-0060(1)

⁵² Sunthurst/211, Beanland, pp. 6-7.

⁵³ Sunthurst/211, Beanland, p. 19 (emphasis added).

⁵⁴ PacifiCorp Complaint, ¶18.

⁵⁵ Sunthurst/401, Beanland/29 (“PacifiCorp objects to this request because it seeks information that is not relevant. In particular, with one exception, the [low-side metered] generators identified in Attachment

PacifiCorp's statement, Sunthurst dropped the matter in its December 16 Opening Testimony.

Then, in its Opening Testimony filed January 26, 2021, PacifiCorp testified "PacifiCorp's merchant function submitted and ultimately constructed two small generating facilities (Q0918 and Q0919) in Utah with essentially the same configuration as PRS1 and PRS2."⁵⁶ Sunthurst investigated and determined that in February 2018 (in Q0918 and Q0919) PacifiCorp allowed adjacent, small solar projects owned by PacifiCorp to meter each project on the *low side*.⁵⁷

Sunthurst notes, without spin, that on at least the two previous occasions described above, PacifiCorp told Sunthurst that low side metering was inconsistent with all other similarly situated interconnection requests, when in fact it is not. Sunthurst did not address low-side metering until its rebuttal testimony because it relied on those erroneous statements from PacifiCorp, which it did not know to be erroneous until PacifiCorp contradicted itself in its Opening Testimony. Given the above context, PacifiCorp's contention in its Opening Brief, that addressing low-side metering in its rebuttal testimony was untimely,⁵⁸ is without merit.

Sunthurst 2.2 were interconnected between the 1890's and 1960's. The one exception was interconnected in 1986. These interconnections do not reflect current industry practice. *If the generators requested interconnection today, they could not use the low-side metering configuration.*"(emphasis added)

⁵⁶ PAC/200, Patzkowski-Taylor-Vaz/7, line 17-18.

⁵⁷ See one-line diagram of Q0918/Q0919 showing low side metering at Sunthurst/404, Beanland/16. PacifiCorp's attempt to rationalize its disparate treatment of Q0918/Q0919 (owned by PacifiCorp Merchant) from PRS1/PRS2 based upon Q0918/Q0919's use of a single step-up transformer is a distinction without a difference. If PacifiCorp truly believed it was necessary to meter transformer losses on the high side of the transformer, and using a single transformer prevents it from doing so, then it would not have permitted Q0918/Q0919 to use a single transformer.

⁵⁸ PacifiCorp's Opening Brief, at 29, lines 8-11.

c. The Commission requested utilities try to accommodate non-standard metering of community solar projects, in Docket No. UM 1930.

In Order No. 19-392, the Commission approved low-side metering for generators 360 kW or less, and asked generators and utilities to “continue to explore additional one-off interconnection enhancements.”⁵⁹ Low-side metering is one of the easiest ways to improve the economics of Oregon community solar projects without sacrificing safety or reliability.

d. Low-side metering of adjacent small generators is reasonable where combined generation on the high side is also metered.

PacifiCorp’s stated reasons for requiring high-side metering are: (a) its PacifiCorp’s policy; and (b) high-side meters enable direct measurement of transformer losses.⁶⁰ Allowing low-side metering in cases where combined generation on the high side is also metered would not undermine either of PacifiCorp’s justifications. Adjacent projects where combined generation is metered on the high side is a special case, where three high side meters would be excessive, because the high side meter at the Point of Interconnection can measure transformation losses. PacifiCorp already created this special category in 2018, when it approved Q0918 and Q0919.

e. PacifiCorp failed to to show high side metering is reasonable.

The record demonstrates that low-side metering of adjacent projects where a third meter is located at the point of interconnection is well-suited for PacifiCorp-owned projects

⁵⁹ Order 19-392, Appendix A at pp. 13-14.

⁶⁰ PacifiCorp’s Opening Brief, p. 28, lines 16-19.

Q0919 and Q0918. The record also shows that PacifiCorp estimated low-side meters would reduce metering costs by \$25,000.⁶¹ After stating in its opening testimony that its projects Q0918 and Q0919 are “essentially the same configuration as PRS1 and PRS2,”⁶² PacifiCorp has failed to demonstrate that requiring Sunthurst to meter at the high side, at an added cost of \$25,000, is reasonable.

2. Remedy Requested

Because PacifiCorp failed to articulate a reasonable basis for requiring high side metering at PRS1/PRS2 while allowing low-side metering at Q0918/Q0919, Sunthurst reiterates its request, on page 35 of its Opening Brief, that the Commission order PacifiCorp to permit low-side metering, or else credit Sunthurst the difference in cost between low- and high-side metering.

E. Reasonableness of the 8% Capital Surcharge

1. Sunthurst’s Rebuttal Argument

- a. PacifiCorp’s statement that Sunthurst carries the burden of proof is incorrect.**

Sunthurst is required to pay PacifiCorp a reasonable fraction of PacifiCorp’s construction overhead costs, ⁶³ *provided that* such costs are assessed on a non-

⁶¹ Sunthurst/211, Beanland/19, PacifiCorp’s August 7, 2020 letter to Sunthurst (“PacifiCorp estimates that this change would result in only approximately \$25,000 in cost savings for PacifiCorp’s costs.”).

⁶² PAC/200, Patzkowski-Taylor-Vaz/7, lines 17-19.

⁶³ OAR 860-082-0015(34)(“System upgrade” means an addition or modification to a public utility’s transmission or distribution system or to an affected system that is required to accommodate the interconnection of a small generator facility.”); OAR 860-082-0035(4) (“The applicant must pay the *reasonable* costs of any system upgrades”).

discriminatory basis with respect to other customers with similar load or other cost-related characteristics⁶⁴. PacifiCorp has never filed its methodology for allocating construction overheads with the Commission, let alone obtained the Commission's approval. Because PacifiCorp's construction overhead allocation methodology is not part of its *pro forma* interconnection agreements filed with the Commission, *PacifiCorp* bears the burden of proving that they are a reasonable requirement of Sunthurst.

b. PacifiCorp's claim that Sunthurst has not disputed PacifiCorp's methodology for apportioning construction overhead costs⁶⁵ is false.

Sunthurst's Opening Brief, pp 35-38, describes multiple instances where PacifiCorp's methodology unreasonably favors PacifiCorp and is unduly discriminatory against small QFs: (a) In 2019, PacifiCorp counted multiple PacifiCorp projects against a single cost cap. (b) In 2019, one of the repowerings PacifiCorp treated as a turn-key project was not a turn-key project. (c) In 2019, only projects paid for by PacifiCorp benefitted from PacifiCorp's Capital Surcharge rate and cost caps. As a result of PacifiCorp's biased methodology, in 2019, the average Capital Surcharge rate on PacifiCorp generation projects was only 0.109%, whereas the rate charged to Sunthurst is 8%. The fact that Sunthurst pays for PacifiCorp's construction overheads at a rate 73 times higher than PacifiCorp's 2019 windmill repowering projects paid for construction overheads is *prima facie* proof PacifiCorp's allocation methodology is unreasonable.

⁶⁴ OAR 860-029-0060(1).

⁶⁵ PacifiCorp's Opening Brief, p. 20, lines 14-15.

2. Remedies sought for unreasonable Capital Surcharge

Because PacifiCorp's Capital Surcharge methodology is standardized, it should have been filed for approval along with PacifiCorp's standard Oregon small generator interconnection agreement. Had it done so, the Commission likely would have ordered changes to the methodology long ago. In recognition of PacifiCorp's burden to justify its methodology, Sunthurst maintains its request, as set forth in its Opening Brief, pp 43-45, that:


- PacifiCorp should show cause why PacifiCorp's Exceptions to proportional allocation of overhead costs should be retained.
- PacifiCorp's rules for allocating overhead charges to QFs should be filed with, and approved by, the Commission.
- PacifiCorp should not charge PRS1 and PRS2 any Capital Surcharge payment until the Commission approves a new methodology.
- Changes to the Capital Surcharge methodology should be applied to PacifiCorp's proxy resource costs in its IRP and in its avoided costs.

IV. CONCLUSION

Sunthurst respectfully requests the Commission order the parties to comply with the actions each has pledged to take in furtherance of resolving this matter, as described in Section II of Sunthurst's Opening Brief, and grant Sunthurst the relief requested in Section III of its Opening Brief.

Dated this 13th day of April 2021.

Respectfully submitted,

By: 
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