



JENNIFER MILLER
Direct (503) 595-3927
jennifer@mrg-law.com

April 13, 2021

VIA ELECTRONIC FILING

Attention: Filing Center
Public Utility Commission of Oregon
P.O. Box 1088
Salem, Oregon 97308-108

Re: UM 2118 –SUNTHURST ENERGY, LLC vs. PACIFICORP dba PACIFIC POWER

Attention Filing Center:

Attached for filing in the above-captioned docket is PacifiCorp's Reply Brief.

Please contact this office with any questions.

Thank you,

Jennifer Miller
Legal Assistant

Attachment

**BEFORE THE PUBLIC UTILITY COMMISSION
OF OREGON
UM 2118**

In the Matter of:

SUNTHURST ENERGY, LLC,

Complainant

vs.

PACIFICORP dba PACIFIC POWER,

Respondent.

PACIFICORP'S REPLY BRIEF

Table of Contents

I.	INTRODUCTION AND SUMMARY OF ARGUMENT	1
II.	ARGUMENT	5
	A. Sunthurst bears the burden to demonstrate that its requested relief will not adversely impact existing customers.....	5
	B. Voltage regulators are required to maintain the same level of service that currently exists on PacifiCorp’s system.....	6
	1. Sunthurst does not dispute that PacifiCorp currently uses LDC settings to implement CVR.....	7
	2. Sunthurst does not dispute PacifiCorp’s evidence that it cannot use LDC settings after PRS2 interconnects.....	7
	3. PacifiCorp consistently explained the need for voltage regulators.....	8
	4. PacifiCorp did not need to study the cost-effectiveness of implementing CVR after PRS2 interconnects because PacifiCorp currently uses LDC settings to implement CVR.....	9
	5. Voltage regulators are not required to address a preexisting condition.....	11
	C. PacifiCorp’s methodology to allocate construction overhead costs is reasonable and consistent with GAAP.....	12
	1. Sunthurst has not substantively disputed the methodology for calculating the 8 percent capital surcharge applicable to its projects.....	12
	2. PacifiCorp relies on the same capital surcharge methodology for multiple Commission-approved applications.....	13
	3. PacifiCorp’s capital surcharge is not arbitrary.....	14
	4. PacifiCorp’s capital surcharge is not discriminatory.....	16
	D. A fiber optic communications link provides greater reliability at a comparable price to radio.....	18
	E. Sunthurst’s costs to install telemetry equipment are reasonable given the size of its projects and the common POI.....	21
	F. High-side metering is consistent with standard industry practice.....	23
	G. By not raising any further arguments in its opening brief, Sunthurst has waived all other arguments contained in its complaint and testimony.....	24
III.	CONCLUSION.....	24

I. INTRODUCTION AND SUMMARY OF ARGUMENT

1 The Public Utility Commission of Oregon (Commission) has steadfastly protected
2 customers from harm caused by transactions with qualifying facilities (QF) under the Public Utility
3 Regulatory Policies Act of 1978 (PURPA).¹ Federal Energy Regulatory Commission (FERC)
4 precedent,² Commission precedent,³ and Commission rules⁴ require that customers remain no
5 worse off after a QF interconnects. This means that customers should not bear costs that they
6 would not otherwise pay, and the level of service provided to customers must not be adversely
7 impacted by the QF interconnection. Applying this bedrock and undisputed principle to the facts
8 in this case demonstrates that Sunthurst Energy, LLC (Sunthurst) has failed to meet its burden of
9 proof and has not shown that it is entitled to relief. Granting Sunthurst's requested relief will result
10 in PacifiCorp customers bearing costs necessitated by Sunthurst's proposed interconnections and
11 being adversely impacted by the proposed interconnections. To maintain customer indifference,
12 the Commission must deny Sunthurst's complaint and approve the cost estimates reflected in
13 PAC/201 and PAC/202, which are the most up-to-date and refined estimates of the reasonable
14 costs to interconnect Pilot Rock Solar 1, LLC (PRS1) and Pilot Rock Solar 2, LLC (PRS2).

15 There are now only five disputed issues in this case. On each issue, PacifiCorp has
16 demonstrated through its interconnection studies, expert testimony, and voluminous discovery

¹ *In re Pub. Util. Comm'n of Or., Investigation into Qualifying Facility Contracting & Pricing*, Docket No. UM 1610, Order No. 14-058, at 12 (Feb. 24, 2014).

² *18 CFR Parts 292 & 375; Qualifying Facility Rates & Requirements Implementation Issues Under the Pub. Util. Regulatory Policies Act of 1978*, 172 FERC ¶ 61,041, at ¶ 335 (July 16, 2020) (emphasizing that PURPA “caps QF rates at the purchasing utility’s avoided costs rather than providing for rates that guarantee the recovery of a QF’s costs”).

³ Order No. 14-058 at 12.

⁴ OAR 860-029-0060(1).

1 responses⁵ that the requirements and estimated costs to interconnect PRS1 and PRS2 are
2 reasonable and necessary to protect existing customers.

3 *i. Voltage regulators are necessary for PacifiCorp customers to maintain their*
4 *existing quality of service.*

5 First, Sunthurst must pay for voltage regulators required by the interconnection of PRS2.
6 The record in this case is clear—PacifiCorp currently implements Conservation Voltage Reduction
7 (CVR) on the feeder that will interconnect PRS1 and PRS2. CVR allows PacifiCorp to efficiently
8 serve customers, reducing customer bills and advancing state energy policy and the Commission’s
9 clear direction. The Commission has repeatedly emphasized the need for utilities to expand CVR
10 capabilities on their systems as part of their resource planning process and deployment of smart
11 grid technologies.⁶ PacifiCorp’s interconnection studies, expert testimony, and discovery
12 responses consistently and comprehensively demonstrate that after PRS2 interconnects,
13 PacifiCorp will no longer be able to implement CVR, to the detriment of customers. Sunthurst has
14 not disputed this evidence. Instead, Sunthurst attempts to refute the need for voltage regulators by
15 ignoring the customer indifference standard and mischaracterizing PacifiCorp’s discovery
16 responses in an attempt to create confusion around what is a straightforward issue, i.e., should
17 PacifiCorp’s customers continue to enjoy the benefits of CVR after PRS1 and PRS2 interconnect.
18 The record is clear—voltage regulators are necessary to maintain the same levels of efficiency on
19 the circuit that currently exist. Without voltage regulators, PacifiCorp would no longer be able to

⁵ PacifiCorp responded to 13 sets of discovery from Sunthurst in this proceeding, consisting of 307 questions (including sub-questions).

⁶ See, e.g., *In re Portland Gen. Elec. Co., 2016 Integrated Resource Plan*, Docket No. LC 66, Order No. 17-386, at 9–10 (Oct. 9, 2017) (approving PGE’s proposal to deploy 1 MWa of conservation voltage reduction in its IRP); *In re Idaho Power Co. 2014, Annual Smart Grid Report*, Docket No. UM 1675, Order No. 15-053, App’x A at 6–7 (Feb. 23, 2015) (discussing and approving of Idaho Power’s implementation of CVR technology through its deployment of smart grid technologies).

1 utilize Line Drop Compensation (LDC) settings to deploy this basic CVR capability on the feeder.
2 The voltage regulators, therefore, are a reasonable cost of interconnection.

3 *ii. The capital surcharge reflects reasonable overhead costs that Sunthurst must pay.*

4 Second, Sunthurst must pay the administrative and general costs incurred by PacifiCorp to
5 interconnect PRS1 and PRS2. These costs are reflected in the capital surcharge, which PacifiCorp
6 applies non-discriminatorily to all interconnection requests that are less than \$10 million—
7 regardless of ownership. PacifiCorp’s expert testimony and extensive discovery responses
8 painstakingly explain how the Company calculates the surcharge per FERC’s Uniform System of
9 Accounts (USOA) and the United States Generally Accepted Accounting Principles (GAAP) and
10 applies it uniformly to all similarly situated capital projects.

11 Sunthurst presents neither expert testimony that the surcharge is contrary to GAAP or
12 USOA nor expert testimony that its preferred methodology complies with GAAP and the USOA.
13 Indeed, Sunthurst’s direct case included virtually no testimony related to the capital surcharge.
14 Sunthurst seeks to carry its burden largely through its briefing but does so by selectively relying
15 on discovery responses to suggest that the capital surcharge is arbitrary and discriminatory because
16 it is calculated differently depending on the capital project’s size. Sunthurst fails to: acknowledge
17 the evidence PacifiCorp provided, which explains why the capital surcharge differs depending on
18 project size. Sunthurst failed to meet its burden to show that the capital surcharge violates GAAP
19 or USOA and therefore should not apply to PRS1 and PRS2.

20 *iii. Fiber optic cable is consistent with a utility’s best practice and is a reasonable cost.*

21 Third, Sunthurst must pay the costs to install fiber optic communications. There is no
22 dispute that fiber optic communications are more reliable than Sunthurst’s preferred use of spread-
23 spectrum radio. Sunthurst argues that radio communications are likely to be lower cost but does

1 so using a cost estimate for fiber optic communications that Sunthurst’s own witness testified was
2 “unquestionably high.”⁷ When the record is read in its entirety, Sunthurst failed to show it is
3 reasonable to install less reliable communications that its witness baselessly claims is “good
4 enough.”⁸

5 iv. It is reasonable for Sunthurst to pay minor costs for telemetry equipment on its
6 premises.

7 Fourth, Sunthurst must pay the reasonable, and relatively minor, costs to install telemetry
8 equipment on its facilities. Sunthurst seeks to exploit an apparent loophole in the Commission’s
9 rules that would allow it to interconnect nearly 5 megawatts (MW) of new generation at a single
10 point of interconnection (POI) while avoiding telemetry costs because each facility is less than
11 3 MW. But when the Commission’s rules are read in their entirety and in context, PacifiCorp must
12 study the projects in aggregate because PRS1 and PRS2 share a common POI.⁹ Therefore,
13 Sunthurst must pay for the reasonable cost of telemetry equipment required because of the
14 interconnection of PRS1 and PR2.

15 v. High-side metering is standard industry practice and is reasonable for PRS1 and
16 PRS2.

17 Fifth, Sunthurst failed to meet its burden to show that its projects should be metered on the
18 low side of the interconnecting transformer. The record shows that high-side metering of
19 distributed generation projects like PRS1 and PRS2 is standard industry practice and PacifiCorp’s
20 standard practice across its system. Sunthurst does not dispute these facts. Indeed, Sunthurst’s
21 direct case included no substantive testimony supporting its request for low-side metering. Instead,
22 Sunthurst waited until its reply testimony to present its direct case. Then, in its brief, Sunthurst

⁷ Sunthurst/200, Beanland/28.

⁸ Sunthurst/400, Beanland/21.

⁹ OAR 860-082-0025(4).

1 mischaracterized PacifiCorp’s discovery responses to inaccurately suggest that low-side metering
2 is more prevalent than it is.¹⁰ However, when the record is viewed in its entirety, there is no
3 dispute that Sunthurst is requesting an exception to standard practices endorsed by the
4 Commission, has failed to justify its request for special treatment, and has failed to meet its burden.

5 *vi. The evidentiary record supports the estimated costs for PRS1 and PRS2 to be*
6 *reasonable.*

7 When viewed in its entirety, the record here shows that PacifiCorp’s cost estimates are
8 reasonable. The estimated costs are consistent with industry standards, the Commission’s rules
9 and precedent, and PURPA’s strict customer indifference mandate. Granting Sunthurst’s
10 requested relief will degrade service to existing customers and increase their costs, in violation of
11 state and federal law.

II. ARGUMENT

12 **A. Sunthurst bears the burden to demonstrate that its requested relief will not**
13 **adversely impact existing customers.**

14 Sunthurst filed its complaint under ORS 756.500.¹¹ As the complainant, Sunthurst has the
15 “burden of proving that the relief requested should be granted.”¹² Thus, Sunthurst must
16 demonstrate that granting its requested relief will enable its generating projects to interconnect to
17 PacifiCorp’s system safely, reliably, and *without adversely impacting existing customers*. The
18 Commission’s interconnection rules, precedent, and federal law require that customers remain
19 indifferent to Sunthurst’s interconnections.¹³ Sunthurst neither recognizes nor meets its burden.

¹⁰ By withholding its affirmative case until rebuttal testimony and thereby depriving PacifiCorp of an opportunity to respond, Sunthurst’s evidence should be given no weight.

¹¹ Sunthurst Opening Brief [hereinafter “Brief”] at 1.

¹² *Columbia Basin Elec. Coop., Inc. v. Umatilla Elec. Coop.*, Docket No. UM 1823, Order No. 17-309, at 3 (Aug. 11, 2017).

¹³ *See, e.g.*, OAR 860-082-0035(4) (“A public utility must identify any adverse system impacts on an affected system caused by the interconnection of a small generator facility to the public utility’s transmission or distribution system Such mitigation measures are considered system upgrades as

1 **B. Voltage regulators are required to maintain the same level of service that**
2 **currently exists on PacifiCorp’s system.**

3 PacifiCorp currently uses LDC settings to implement CVR. The Commission has
4 consistently pushed utilities to implement CVR because it allows a distribution line to maintain
5 lower system voltage while still maintaining American National Standards Institute (ANSI)
6 Range A, which lowers energy use and system losses.¹⁴ This means that all else being equal,
7 customers served by the distribution line consume less energy and pay less for electric service.¹⁵
8 The voltage regulators are required to allow PacifiCorp to continue to utilize LDC settings and
9 implement CVR.¹⁶ Without the voltage regulators, PacifiCorp’s customers served by the
10 distribution line will pay more for the same level of service.¹⁷

11 Sunthurst’s brief fails to directly address the need for voltage regulators, fails to reconcile
12 its requested relief with the customer indifferent mandate, and mischaracterizes the record by
13 selectively quoting discovery responses out-of-context. None of these arguments rebut
14 PacifiCorp’s consistent claim that voltage regulators are necessary to maintain the same level of
15 service on its circuit that exists before the planned interconnection of PRS1 and PRS2.

defined in these rules. The applicant must pay the reasonable costs of any system upgrades.”);
172 FERC ¶ 61,041, at ¶ 335.

¹⁴ See *Implementing CVR through voltage regulator LDC settings*, Jeffrey M. Triplett, P.E., Sean A. Kufel, P.E. (Inst. of Electrical and Electronic Engineers May 7, 2012) (abstract available here: <https://ieeexplore.ieee.org/abstract/document/6194566/footnotes#footnotes>) (“Line Drop Compensation (LDC) is a standard feature that is available on virtually all voltage regulator controls that can be used to implement CVR. Rather than simply lowering the voltage output of the regulator, LDC uses a load-side CT and voltage-compensation settings representing the resistance and reactance of the feeder to monitor load current and maintain a desired voltage level at some point down the lines. The current-monitoring capability of the LDC system allows it to keep the feeder voltage as low as possible during both peak and light loading periods in a dynamic response to real-time system needs.”).

¹⁵ PAC/200, Patzkowski, Taylor, Vaz/20; Sunthurst/401, Beanland/32.

¹⁶ PAC/200, Patzkowski, Taylor, Vaz/20; Sunthurst/401, Beanland/32.

¹⁷ See PAC/200, Patzkowski, Taylor, Vaz/21 (explaining that removing the voltage regulators from the interconnection request “would result in a lack of an ability to maintain efficient voltage regulation, which exists today”); Sunthurst/401, Beanland/32.

1 **1. Sunthurst does not dispute that PacifiCorp currently uses LDC settings to**
2 **implement CVR.**

3 Sunthurst acknowledges that “PacifiCorp uses LDC regulation to control voltage on the
4 vast majority of its feeders across its system.”¹⁸ Using LDC settings is consistent with the Pacific
5 Power Engineering Handbook¹⁹ and Commission guidance encouraging CVR.²⁰ Therefore, it is
6 undisputed that customers currently receive the benefits of CVR through lower-cost, energy-
7 efficient voltage regulation because PacifiCorp can utilize LDC settings.

8 **2. Sunthurst does not dispute PacifiCorp’s evidence that it cannot use LDC**
9 **settings after PRS2 interconnects.**

10 PacifiCorp’s expert witness testified that after PRS2 interconnects, the generation exceeds
11 load on the feeder, which precludes PacifiCorp from using the LDC settings to implement CVR.²¹
12 Sunthurst presented no evidence that PacifiCorp could continue to use LDC settings to implement
13 CVR after PRS2 interconnects. Therefore, it is undisputed that customers currently receive the
14 benefits of CVR, and customers will no longer receive the benefits of CVR after PRS2
15 interconnects. On this basis alone, voltage regulators are required to maintain customer
16 indifference, as required by PURPA,²² Commission precedent,²³ and Commission rules.²⁴
17 Sunthurst has failed to meet its burden to demonstrate that customers will be in the same position
18 after PRS2’s interconnection without voltage regulators.

¹⁸ Brief at 12.

¹⁹ Sunthurst/401, Beanland/104.

²⁰ *See In re Pub. Util. Comm’n of Or., Consideration for Adoption Staff Proposed Guidelines for Distribution Sys. Planning*, Docket No. UM 2005, Order No. 20-485, App’x A at 24 (Dec. 23, 2020) (requiring utilities to include CVR as part of the “utility’s planned investments, tools and activities to advance the long term [Distribution System Plan] vision” to “maximiz[e] reliability, customer benefits, and efficient operation of the distribution system.”).

²¹ PAC/200, Patzkowski, Taylor, Vaz/20; Sunthurst/401, Beanland/32.

²² 18 C.F.R. § 292.306(a).

²³ Order No. 14-058 at 12.

²⁴ OAR 860-082-0035(4).

1 **3. PacifiCorp consistently explained the need for voltage regulators.**

2 Instead of disputing PacifiCorp’s evidence, Sunthurst instead mischaracterizes the record
3 by selectively quoting discovery responses to suggest that PacifiCorp has been inconsistent in
4 explaining why voltage regulators are required.²⁵ But when read in context and in their entirety,
5 PacifiCorp’s discovery responses have been clear and consistent. PacifiCorp explained in
6 discovery (and reiterated in testimony) that voltage regulators were required because the addition
7 of PRS2 caused generation to exceed load on the feeder and therefore PacifiCorp could no longer
8 use LDC settings absent the voltage regulators.²⁶

9 Sunthurst then asked PacifiCorp whether voltage regulators are required “when generation
10 is greater than load, on an instantaneous basis.”²⁷ PacifiCorp responded that the need for voltage
11 regulation does not arise *only* when generation is greater than load but that the “specific trigger for
12 the voltage regulators in the field for PRS2 is the inability for the voltage regulator control in the
13 substation to measure load on the feeder to enable the use of [LDC] settings.”²⁸ In other words,
14 while voltage regulators may not be required in all situations simply because generation exceeds
15 loads, *in this case*, voltage regulators are required for that reason.

16 Sunthurst then asked why PacifiCorp did not require voltage regulators for PRS1. The
17 Company explained once again that with the addition of only PRS1’s generation, “[LDC] settings
18 can be implemented” because load on the feeder exceeds generation.²⁹

19 PacifiCorp has been entirely consistent throughout this case—PacifiCorp’s interconnection
20 studies, expert testimony, and discovery responses explain why the Company must install voltage

²⁵ Brief at 11–12.

²⁶ PAC/200, Patzkowski, Taylor, Vaz/20; Sunthurst/401, Beanland/32.

²⁷ Sunthurst/401, Beanland/83.

²⁸ Sunthurst/401, Beanland/83.

²⁹ Sunthurst/401, Beanland/84.

1 regulators to maintain LDC settings and thereby maintain customer service at the same level which
2 currently exists. The fact that voltage regulators may not be required if PRS1 and PRS2 were
3 differently sized, or interconnected to a different circuit, does not mean that voltage regulators are
4 not needed *in this case*.

5 **4. PacifiCorp did not need to study the cost-effectiveness of implementing**
6 **CVR after PRS2 interconnects because PacifiCorp currently uses LDC**
7 **settings to implement CVR.**

8 Sunthurst claims that PacifiCorp must provide economic analysis demonstrating that the
9 use of LDC settings is cost-effective before requiring voltage regulators.³⁰ Sunthurst’s argument
10 inaccurately frames the issue as if PacifiCorp were deciding whether to use LDC settings in the
11 first instance. PacifiCorp already made that determination before Sunthurst requested
12 interconnection, and PacifiCorp currently uses LDC settings to implement CVR on Circuit 5W406.

13 PacifiCorp’s expert testimony explains that the Company can no longer use LDC to
14 maintain CVR on the circuit once PRS2 interconnects—a fact that Sunthurst does not directly
15 dispute.³¹ Consequently, PacifiCorp does not need to conduct any additional studies to quantify
16 the efficiency losses that would result from losing CVR on the circuit because the interconnection
17 study for PRS2 already determined that voltage regulators were necessary to maintain the same
18 level of service on the circuit.³² PURPA and Commission rules require PacifiCorp to keep
19 customers indifferent to Sunthurst’s interconnection.³³ PacifiCorp does not need a cost-

³⁰ Brief at 8–10.
³¹ PAC/200, Patzkowski, Taylor, Vaz/20; *see also* PAC/103, Bremer/1–17 (Q1045 SIS Report).
³² PAC/103, Bremer/7–8.
³³ *S. Cal. Edison Co., San Diego Gas & Elec. Co.*, 71 FERC ¶ 61,269, at ¶ 62,080 (1995) (“The intention [of Congress] was to make ratepayers indifferent as to whether the utility used more traditional sources of power or the newly-encouraged alternatives.”); *see also* OAR 860-082-0035(4).

1 effectiveness study to know that customers will be worse off if they lose the benefits of CVR on
2 Circuit 5W406.³⁴

3 Sunthurst’s brief mischaracterizes the record by once again selectively quoting a discovery
4 response to imply that PacifiCorp failed to perform a cost-effectiveness study that should have
5 been performed.³⁵ PacifiCorp’s full response tells a different story. When asked whether the use
6 of LDC settings was required to “save energy,” PacifiCorp explained—yet again—that the voltage
7 regulators “are required to maintain the Company’s ability to utilize LDC settings” and that “LDC
8 settings are used in the case of PRS1 and PRS2 to save energy.”³⁶ The Company acknowledged
9 that it had not performed “detailed studies to determine the energy efficiency savings” resulting
10 from the use of LDC settings for PRS1 and PRS2.³⁷ Nonetheless, PacifiCorp explained that “[t]he
11 System Impact Study (SIS) determined the upgrades required to maintain existing system
12 capabilities and efficiency, which resulted in the required two distribution line regulator banks.”³⁸
13 PacifiCorp’s expert testimony,³⁹ discovery responses,⁴⁰ and interconnection studies provide
14 substantial evidence demonstrating that customers will be worse off if PRS2 interconnects without
15 the required voltage regulators.⁴¹

16 Sunthurst further clouds the record by selectively quoting another PacifiCorp discovery
17 response to claim that PacifiCorp failed to preserve the results from its voltage studies.⁴² In fact,

³⁴ Moreover, as noted earlier, the Commission recognizes and encourages utilities to use CVR due to the energy efficiency benefits.

³⁵ Brief at 10.

³⁶ Sunthurst/401, Beanland/103–04; *see also* PAC/200, Patzkowski, Taylor, Vaz/22 [“Voltage regulators] allow the continuation of energy efficient operation of the electrical system that exists today.”].

³⁷ Sunthurst/401, Beanland/104.

³⁸ Sunthurst/401, Beanland/104.

³⁹ PAC/200, Patzkowski, Taylor, Vaz/19–22.

⁴⁰ Sunthurst/401, Beanland. 32, 83–84, 101–02.

⁴¹ PAC/103, Bremer/6–8.

⁴² Brief at 13.

1 PacifiCorp explained that the Company performed the voltage studies for PRS2 in 2018⁴³ but no
2 longer has the detailed voltage studies because the vendor stopped supporting the software used to
3 conduct these studies.⁴⁴ For cybersecurity reasons, PacifiCorp was required to remove the
4 software from all Company computers to maintain its Independent System Operator (ISO)
5 certification with the California ISO (CAISO).⁴⁵ Moreover, the lack of voltage studies here is
6 irrelevant because the voltage regulators are required to allow continued use of LDC settings, not
7 simply to maintain ANSI Range A voltages.⁴⁶

8 **5. Voltage regulators are not required to address a preexisting condition.**

9 Sunthurst also argues that the voltage regulators are required to address a preexisting
10 condition on PacifiCorp's system.⁴⁷ The only evidence Sunthurst can muster to support this
11 conjecture, however, is Mr. Hale's recollection of a June 9 teleconference with PacifiCorp.⁴⁸ But
12 Sunthurst's own notes from that meeting—which Sunthurst relied on but did not include in
13 evidence—do not show that the voltage regulators are required to address a preexisting condition.
14 Rather, Mr. Hale's notes show that PacifiCorp discussed the loss of the functionality of
15 compensation settings as a basis for requiring voltage regulators.⁴⁹ Mr. Hale's recollection of the
16 June 9 meeting is also at odds with the interconnection studies related to PRS2, the Company's
17 discovery responses in this case, and PacifiCorp's expert testimony.

18 Moreover, Sunthurst's arguments on this point are inconsistent. Sunthurst cannot claim
19 the voltage regulators are required to address a preexisting deficiency on PacifiCorp's system⁵⁰

⁴³ Sunthurst/401, Beanland/65.

⁴⁴ Sunthurst/401, Beanland/32.

⁴⁵ Sunthurst/401, Beanland/32.

⁴⁶ Sunthurst/401, Beanland/101; PAC/200, Patzkowski, Taylor, Vaz/20.

⁴⁷ Brief at 12–13.

⁴⁸ Brief at 12–13.

⁴⁹ Attached as Exhibit 1 is Sunthurst's notes from the June 9 meeting provided to PacifiCorp in discovery.

⁵⁰ Sunthurst/200, Beanland/5.

1 while also asserting that PacifiCorp does not need the voltage regulators to maintain system safety
2 or voltages.⁵¹ These assertions are contradictory. PacifiCorp has repeatedly described in
3 testimony and discovery responses that it must install voltage regulators to continue using LDC
4 settings.⁵²

5 **C. PacifiCorp’s methodology to allocate construction overhead costs is reasonable**
6 **and consistent with GAAP.**

7 **1. Sunthurst has not substantively disputed the methodology for calculating**
8 **the 8 percent capital surcharge applicable to its projects.**

9 The Commission’s rules allow PacifiCorp to charge interconnection customers for
10 construction overhead expenses incurred to interconnect a generation resource.⁵³ For overhead
11 costs that the Company cannot directly charge to a particular interconnection customer, PacifiCorp
12 uses a capital surcharge to reflect a reasonable portion of the administrative and general costs that
13 cannot be assigned directly to a capital project under FERC’s USOA and GAAP.⁵⁴ PacifiCorp
14 uses the same capital surcharge methodology across its six-state service territory to allocate
15 overhead costs to all capital projects.

16 The current capital surcharge is 8 percent for capital projects that are less than
17 \$10 million.⁵⁵ PacifiCorp calculates the capital surcharge applicable to all projects less than
18 \$10 million, including PRS1 and PRS2, by taking the construction support costs and dividing them
19 by the direct capital spending for the year.⁵⁶ PacifiCorp’s expert witness testified that this

⁵¹ Brief at 6–7.

⁵² Sunthurst/401, Beanland/32, 101; PAC/200, Patzkowski, Taylor, Vaz/20.

⁵³ OAR 860-029-0010(9) (listing “administrative costs incurred by an electric utility” as a reasonable cost of interconnection); *see also* OAR 860-027-0045(1) (adopting FERC’s USOA for Oregon electric companies).

⁵⁴ PAC/200, Patzkowski, Taylor, Vaz/36.

⁵⁵ The actual amount of the capital surcharge varies on a yearly basis. PAC/200, Patzkowski, Taylor, Vaz/37. Currently, the capital surcharge estimated for Sunthurst’s projects is 8 percent. PAC/200, Patzkowski, Taylor, Vaz/37.

⁵⁶ PAC/200, Patzkowski, Taylor, Vaz/37.

1 methodology reasonably allocates administrative and general costs to interconnection customers,
2 consistent with GAAP and the USOA.⁵⁷ PacifiCorp further explained the basis for its capital
3 surcharge methodology through extensive discovery, which Sunthurst has included in the record.⁵⁸

4 Sunthurst neither disputes that the Commission’s rules allow PacifiCorp to charge for
5 construction overhead expenses nor that PacifiCorp will incur overhead expenses if PRS1 and
6 PRS2 interconnect to its system. Instead, Sunthurst seeks to have PacifiCorp customers pay for
7 these costs. Sunthurst provided no expert testimony disputing PacifiCorp’s evidence that the
8 capital surcharge is consistent with GAAP, the USOA, and standard accounting practices in the
9 utility industry. Similarly, Sunthurst presented no expert testimony that its preferred methodology
10 for allocating overhead costs would comply with GAAP and the USOA. Indeed, Sunthurst’s
11 Opening Testimony included only one short paragraph addressing the capital surcharge, which
12 contained little more than conjecture.⁵⁹ Sunthurst has therefore failed to meet its burden to show
13 that the capital surcharge is unreasonable.

14 **2. PacifiCorp relies on the same capital surcharge methodology for multiple**
15 **Commission-approved applications.**

16 Sunthurst argues that the Commission has not explicitly approved PacifiCorp’s
17 methodology for allocating construction overhead costs to interconnection customers.⁶⁰ But
18 Sunthurst cannot dispute that the Commission’s rules require Sunthurst to pay construction
19 overhead costs incurred to interconnect its projects.⁶¹ Sunthurst also does not dispute that
20 PacifiCorp uses the same capital surcharge methodology for all capital projects, not just
21 interconnection cost estimates. Indeed, the same capital surcharge methodology Sunthurst

⁵⁷ PAC/200, Patzkowski, Taylor, Vaz/36–37.
⁵⁸ Sunthurst/500, Beanland/2–5, 57–58; Sunthurst/401, Beanland/13–18.
⁵⁹ Sunthurst/100, Hale/11.
⁶⁰ Brief at 35.
⁶¹ See OAR 860-082-0010(9).

1 disputes here is used for ratemaking. For example, the repowering projects Sunthurst addresses in
2 its brief were included in customer rates based on the same capital surcharge methodology used
3 here.⁶² PacifiCorp also uses the same capital surcharge methodology in its resource cost
4 assumptions used in its Integrated Resource Plans (IRP).⁶³ The Commission-approved avoided
5 cost prices also include the same capital surcharge, which means that QFs (like Sunthurst) are
6 compensated for avoided construction overhead costs.⁶⁴ Granting Sunthurst's relief would go far
7 beyond just interconnections and would result in a fundamental change to PacifiCorp's well
8 established accounting practices used across its six-state service area. Sunthurst has failed to
9 demonstrate such a dramatic change is warranted given the lack of evidence presented in this case.

10 **3. PacifiCorp's capital surcharge is not arbitrary.**

11 Sunthurst argues that the methodology for calculating the capital surcharge for projects
12 greater than \$10 million violates USOA because it is arbitrary.⁶⁵ On the contrary, PacifiCorp's
13 rigorous procedure for allocating construction overhead costs complies with USOA and GAAP—
14 a fact that Sunthurst has not disputed with expert testimony.⁶⁶ The Company annually reviews
15 and approves the capital surcharge amount by deriving construction support costs and dividing it
16 by the direct capital spending for the year.⁶⁷ Additionally, the Company reviews each cost center
17 to verify and update the amount that should be part of the capital surcharge assessment.⁶⁸ This

⁶² Sunthurst/500, Beanland/58. The record in PacifiCorp's recent rate case, Docket UE 374, indicates that Staff reviewed the capital surcharge applied to transmission investments and did not propose any adjustments. *See, e.g.*, Docket No. UE 374, Staff/2101, Hanhan-Rashid-Muldoon/16. PacifiCorp requests that the Commission take official notice of Staff/2101. OAR 860-001-0460(1)(d).

⁶³ PAC/200, Patzkowski, Taylor, Vaz/38–39.

⁶⁴ PAC/200, Patzkowski, Taylor, Vaz/38–39; Sunthurst/401, Beanland/13–18.

⁶⁵ Brief at 40.

⁶⁶ PAC/200, Patzkowski, Taylor, Vaz/37–38; *see also* Sunthurst/500, Beanland/3–5 (discussing PacifiCorp's surcharge methodology in detail).

⁶⁷ PAC/200, Patzkowski, Taylor, Vaz/36–37.

⁶⁸ PAC/200, Patzkowski, Taylor, Vaz/37.

1 review includes a comparison to the prior year, organizational changes, and changes to specific
2 roles.⁶⁹ Based on all this data, PacifiCorp controllers approve the surcharge rate based on actual
3 and forecasted construction support costs and capital spending.⁷⁰ This process ensures that
4 PacifiCorp bases the capital surcharge on the Company's actual overhead and equitably
5 proportions the costs across all projects. Nothing about the rigorous process described above is
6 arbitrary.

7 Sunthurst claims that PacifiCorp's \$500,000 cap on the capital surcharge for generation
8 projects larger than \$10 million is arbitrary because it has no relationship to the total amount of
9 capital spent.⁷¹ But the Company explained in discovery that large-generation projects are
10 typically turn-key projects where external contractor(s) conduct the engineering, procurement, and
11 construction of the project, which leads to a lower surcharge percentage for projects greater than
12 \$10 million.⁷² Sunthurst presented no expert testimony to dispute these facts. Therefore, the
13 evidentiary record demonstrates that it is reasonable to apply a different surcharge methodology
14 for larger projects because they are differently situated. Contrary to Sunthurst's baseless
15 conjecture, PacifiCorp's methodology is not arbitrary but is consistent with the USOA and GAAP.

16 Sunthurst also generally claims that PacifiCorp's methodology is arbitrary because it
17 differentiates between generation and transmission investments.⁷³ Sunthurst presented this
18 argument for the first time in its opening brief and therefore provided no expert testimony
19 explaining why the differentiation is arbitrary or contrary to USOA or GAAP. PacifiCorp

⁶⁹ PAC/200, Patzkowski, Taylor, Vaz/37.

⁷⁰ PAC/200, Patzkowski, Taylor, Vaz/37.

⁷¹ Brief at 41–43.

⁷² Sunthurst/500, Beanland/4.

⁷³ Brief at 41.

1 explained the basis for the distinction in a discovery response that Sunthurst included in the record,
2 as discussed above.⁷⁴ Sunthurst has failed to meet its burden because it provided no evidence.

3 Moreover, Sunthurst presented no evidence that applying the same methodology across the
4 board regardless of the type of project or the project cost complies with the requirements of GAAP
5 and the USOA for fairly allocating overhead costs to capital projects. Without that affirmative
6 evidence, Sunthurst cannot meet its burden and there is no basis to conclude that Sunthurst's
7 proposed methodology complies with applicable accounting requirements.

8 Finally, the USOA provision cited by Sunthurst as the basis for its claim that the capital
9 surcharge is arbitrary does not even refer to construction overhead costs generally but refers to a
10 specific provision in the USOA that addresses the determination of “pay roll charges includible in
11 construction overheads.”⁷⁵ Nothing in this provision suggests that the language quoted by
12 Sunthurst is intended to apply to all overhead construction costs, as Sunthurst argues. Nonetheless,
13 Sunthurst has not proven that any aspect of the Company's capital surcharge policy is arbitrary in
14 any way. The policy complies with GAAP and USOA to ensure all projects pay a capital surcharge
15 proportionally allocated based on the project's size. For PRS1 and PRS2, PacifiCorp has estimated
16 the 8 percent surcharge in the same manner it would for any project of this size—even its own
17 projects. The capital surcharge is a reasonable cost of interconnection.⁷⁶

18 **4. PacifiCorp's capital surcharge is not discriminatory.**

19 Sunthurst claims that the capital surcharge methodology “unduly discriminates with
20 respect to other customers with similar load or other cost-related characteristics.”⁷⁷ In fact,

⁷⁴ Sunthurst/500, Beanland/4 (“It is important to note that expenses for building a new generation plant are usually all turnkey expenses and surcharge is generally governed by the maximum limit due to the large capital investment required to build a new power plant.”).

⁷⁵ 18 C.F.R. Part 101, Elec. Plant Instructions 4(B).

⁷⁶ See OAR 860-029-0010(9).

⁷⁷ Brief at 42.

1 PacifiCorp applies the same capital surcharge methodology to all projects, whether owned by
2 PacifiCorp or not.⁷⁸ Sunthurst presented no evidence to dispute this fact.

3 Instead, Sunthurst speculates that because large projects are more likely to be owned by
4 PacifiCorp, PacifiCorp pays a lower capital surcharge percentage than customer-owned projects
5 that are likely to cost less than \$10 million.⁷⁹ This argument, however, does not show
6 discrimination among *customers with similar load or other cost-related characteristics*.
7 PacifiCorp’s discovery responses explain that projects costing more than \$10 million are
8 differently situated than projects costing less than \$10 million.⁸⁰ Because projects above and
9 below the \$10 million threshold do not have similar characteristics, PacifiCorp applies different
10 methodologies. There is nothing discriminatory about this approach.

11 Sunthurst also suggests that PacifiCorp has utilized the surcharge in a discriminatory way
12 because it has applied a single surcharge to its repowering project even though multiple facilities
13 were repowered.⁸¹ Again, Sunthurst raised this issue for the first time in its brief. The only
14 evidence in the record is PacifiCorp’s discovery responses showing that the Company treated
15 repowering as a single project, subject to a single surcharge.⁸² Nothing prohibits PacifiCorp from

⁷⁸ PAC/200, Patzkowski, Taylor, Vaz/36; *see also* Sunthurst/401, Beanland 5, 20 (showing examples of PacifiCorp applying same capital surcharge to owned resources).

⁷⁹ Brief at 42.

⁸⁰ *See, e.g.*, Sunthurst/401, Beanland/15–18 (detailed surcharge cost tables for the Company’s 2017 IRP); Sunthurst/500, Beanland/4; Sunthurst/500, Beanland/57 (“[F]or turnkey projects, engineering, procurement, and construction are conducted by contractor(s) and not done by internal PacifiCorp personnel, which leads to lower surcharge percentage being assigned to projects greater than \$10 million.”).

⁸¹ Brief at 42–43.

⁸² Sunthurst/500, Beanland/58. Sunthurst also argues for the first time in its brief that one repowered facility—Goodnoe Hills—was not a turn-key project. Brief at 37–38. Sunthurst’s argument is unclear, but it appears to argue that because there was more than one contract for Goodnoe Hills, it was not a turn-key project. This argument has no factual support in the record. Turn-key projects can have more than one contract.

1 treating the repowering projects as a single project for surcharge purposes, and Sunthurst has
2 provided no evidence to the contrary.

3 **D. A fiber optic communications link provides greater reliability at a comparable**
4 **price to radio.**

5 PacifiCorp’s estimated interconnection costs include a fiber optic communications link,
6 which is more reliable than using spread-spectrum radio, has a comparable cost, and is consistent
7 with PacifiCorp’s nondiscriminatory interconnection policies.⁸³ Sunthurst requests that the
8 Commission require PacifiCorp to install a spread-spectrum radio link instead because Sunthurst
9 believes it will be lower cost.⁸⁴ But Sunthurst has failed to meet its burden to show that a fiber
10 optic link is not a reasonable cost necessitated by its interconnection requests.

11 Sunthurst argues that fiber optics are likely higher cost because PacifiCorp’s most recent
12 cost estimate for fiber installation (\$38,000) is too low and therefore the Commission should
13 compare the costs of radio communications to PacifiCorp’s initial \$60,000 estimate for fiber.⁸⁵
14 Sunthurst’s own opening testimony, however, undermines this argument.

15 PacifiCorp initially estimated that a fiber optic link would cost roughly \$60,000 or \$14,000
16 more than the estimated cost for radio communications.⁸⁶ In its opening testimony, Sunthurst’s
17 expert witness testified that PacifiCorp’s initial estimate was “unquestionably high,” particularly
18 when compared to the costs of fiber optic links in other CSP interconnection studies.⁸⁷ In response,
19 PacifiCorp reviewed and refined its cost estimate, resulting in a decrease of nearly \$20,000.⁸⁸

⁸³ PAC/200, Patzkowski, Taylor, Vaz/22–23; *see also* Sunthurst/401, Beanland/85 (“In the communications systems deployed across the PacifiCorp service territory, fiber optic has proven to be highly reliable and effective.”).

⁸⁴ Brief at 21.

⁸⁵ Brief at 18.

⁸⁶ PAC/200, Patzkowski, Taylor, Vaz/24.

⁸⁷ Sunthurst/200, Beanland/28.

⁸⁸ PAC/201, Patzkowski, Taylor, Vaz/5.

1 PacifiCorp testified the revised estimate is consistent with the other CSP projects reviewed by
2 Sunthurst’s expert witness.⁸⁹

3 In its rebuttal testimony, Sunthurst’s same expert witness claims that the lower estimate (in
4 line with its prior recommendation) is the product of “wishful thinking,” and PacifiCorp should
5 instead use the higher \$60,000 estimate that it had previously testified was “unquestionably
6 high.”⁹⁰ Sunthurst cannot meet its burden of proof by relying on its own contradictory testimony.

7 Moreover, Sunthurst’s attempt to argue that the costs of fiber far outstrip the cost of radio
8 communications is also undermined by its own prior expert engineer, who agreed that using radio
9 instead of fiber would produce only a “slight” reduction in costs—meaning the costs are
10 comparable.⁹¹

11 Sunthurst also mischaracterizes the record (yet again) and claims that “PacifiCorp
12 determined (*for the first time*) in its testimony that the cost of a fiber link to PRS1 and PRS2 is
13 comparable to the cost of spread spectrum radio, and therefore is requiring fiber over the objection
14 of Sunthurst, who believes the lower cost and risk associated with spread spectrum radio makes it
15 the reasonable choice.”⁹² This assertion is misleading and false. On the contrary, even before
16 PacifiCorp refined and lowered its cost estimate for fiber installation, PacifiCorp maintained that
17 fiber communications were comparable in cost and therefore more cost-effective given the
18 enhanced reliability.⁹³

⁸⁹ PAC/200, Patzkowski, Taylor, Vaz/24.

⁹⁰ Brief at 18; Sunthurst/400, Beanland/23.

⁹¹ Sunthurst/211, Beanland/13.

⁹² Brief at 15 (emphasis added).

⁹³ Sunthurst/211, Beanland/20 (PacifiCorp’s August 7, 2020, letter to Sunthurst stated, “PacifiCorp has determined that a microwave radio option to provide communications between the Pilot Rock solar site and Pilot Rock substation is not the most cost effective alternative.”).

1 Sunthurst claims that PacifiCorp’s reduced cost estimate is “inexplicable” from an
2 engineering perspective.⁹⁴ PacifiCorp clearly explained, both in testimony⁹⁵ and discovery,⁹⁶
3 exactly how it refined the estimate: PacifiCorp typically estimates \$42,000 per mile for new
4 distribution lines and \$60,000 per mile for existing distribution lines; PacifiCorp adjusted the
5 estimated costs for PRS1 to use \$42,000/mile; and at 0.9 miles, the updated estimated cost is
6 approximately \$38,000.⁹⁷ Far from being inexplicable, the explanation is quite simplistic.

7 Furthermore, PacifiCorp explained that it refined the estimate in response to
8 Mr. Beanland’s testimony that the initial estimate was “unquestionably high,” which also
9 undermines any claim that the reduced estimate is “inexplicable.” Of course, some modifications
10 may be necessary once PacifiCorp designs the fiber optic link, which is why the current cost is still
11 an estimate. But the notion that the newly revised costs are some inexplicable change when they
12 are, in part, based on Sunthurst’s own expert testimony is illogical. PacifiCorp’s refined cost
13 estimate, outlined in its testimony and discovery responses, represents the most reasonable
14 estimate of the cost to install fiber optic communications and represents comparable costs to the
15 less reliable radio alternative.⁹⁸ Therefore, the Commission should use this most recent cost
16 estimate to determine whether the installation of a fiber optic link is a reasonable interconnection
17 cost.

18 Finally, in keeping with its consistent mischaracterizations, Sunthurst tries to assert that
19 PacifiCorp will derive some additional benefit from installing a 48-count fiber instead of the

⁹⁴ Brief at 18.

⁹⁵ PAC/200, Patzkowski, Taylor, Vaz/23–24.

⁹⁶ Sunthurst/401, Beanland/86

⁹⁷ PAC/200, Patzkowski, Taylor, Vaz/23–24.

⁹⁸ PAC/200, Patzkowski, Taylor, Vaz/23–24; Sunthurst/401, Beanland/85–86.

1 12-count fiber that Sunthurst proposes.⁹⁹ PacifiCorp has already explained that the 48-count fiber
2 proposed in the PRS1 interconnection study is the standard fiber used across PacifiCorp’s system
3 and that maintaining a unique 12-count line for Sunthurst’s projects would likely be more
4 expensive after accounting for spare lines.¹⁰⁰ Sunthurst now claims that PacifiCorp “hopes to
5 monetize the excess capacity in the fiber optic cable” by “leasing out surplus fiber.”¹⁰¹ This
6 assertion is a blatant mischaracterization of the Company’s discovery response, which
7 unequivocally states that “PacifiCorp does not place any commercial value on this short segment
8 of fiber and does not anticipate any potential for lease revenue on it.”¹⁰²

9 While Sunthurst relies on blatant mischaracterizations, Sunthurst fails to address
10 PacifiCorp’s assertion that a radio link is less reliable because of the risk of interference from other
11 spread-spectrum users.¹⁰³ Sunthurst also does not dispute that PacifiCorp has a nondiscriminatory
12 policy of requiring interconnection requests to implement fiber optic communication links.¹⁰⁴
13 Given the greater reliability and comparable cost, a fiber optic link is a reasonable interconnection
14 cost under these circumstances.

15 **E. Sunthurst’s costs to install telemetry equipment are reasonable given the size of**
16 **its projects and the common POI.**

17 As an accommodation to Sunthurst, PacifiCorp removed over \$525,000 in telemetry
18 installation costs from its interconnection cost estimates.¹⁰⁵ What remains are some relatively
19 minor costs to accommodate the installation of telemetry equipment on Sunthurst’s facilities.

⁹⁹ Brief at 19–20.

¹⁰⁰ PAC/200, Patzkowski, Taylor, Vaz/25.

¹⁰¹ Brief at 19–20.

¹⁰² Sunthurst/401, Beanland/110; *see also* Sunthurst/401, Beanland/87 (“PacifiCorp has no plans to use any of the other fibers in this cable.”).

¹⁰³ PAC/200, Patzkowski, Taylor, Vaz/22.

¹⁰⁴ PAC/200, Patzkowski, Taylor, Vaz/23.

¹⁰⁵ PAC/100, Bremer/10–11.

1 The Commission’s rules¹⁰⁶ state that under most circumstances, a utility cannot charge an
2 interconnection customer for telemetry equipment if the generator’s nameplate capacity is less
3 than 3 MW. But that rule cannot be read in isolation and must be considered within the broader
4 context of the Commission’s interconnection rules and policies. In particular, OAR 860-082-
5 0025(4) states that when “an applicant proposes to interconnect multiple small generator facilities
6 to [a] public utility’s transmission or distribution system *at a single point of interconnection*,” the
7 public utility “*must* evaluate” the interconnection request “based on the combined total nameplate
8 capacity.”¹⁰⁷ This rule recognizes that it is unreasonable to allow what is effectively a single large
9 generator to avoid paying for telemetry equipment simply by breaking up the project into multiple
10 smaller requests, as Sunthurst has done here. The Commission’s rules reasonably allow PacifiCorp
11 to charge all telemetry costs to Sunthurst because PRS1 and PRS2 use the same POI, and the
12 combined nameplate capacity of both projects is well over 3 MW.¹⁰⁸ PacifiCorp removed more
13 than \$525,000 in telemetry expenses to accommodate Sunthurst and advance the CSP.¹⁰⁹

14 Sunthurst argues that because PRS1 and PRS2 are each less than 3 MW, PacifiCorp cannot
15 charge either project for telemetry costs even though they share a common POI.¹¹⁰ Sunthurst
16 completely ignores OAR 860-082-0025(4), which requires the aggregation of PRS1 and PRS2
17 because they share a common POI. To that end, Sunthurst does not even address the impact of
18 OAR 860-082-0025(4) in its opening brief.

¹⁰⁶ See generally OAR 860-082-0070.

¹⁰⁷ OAR 860-082-0025(4) (emphasis added).

¹⁰⁸ See OAR 860-082-0025(4).

¹⁰⁹ PAC/100, Bremer/11.

¹¹⁰ Brief at 25.

1 **F. High-side metering is consistent with standard industry practice.**

2 Metering distributed generation resources like PRS1 and PRS2 on the high side of the
3 transformer is consistent with PacifiCorp and industry practice, including the same interconnection
4 policies Sunthurst has relied on in this case.¹¹¹ Sunthurst provides no evidence to dispute these
5 facts. Instead, Sunthurst once again selectively cites PacifiCorp discovery responses to suggest
6 that low-side metering is common across PacifiCorp’s system.¹¹² In particular, Sunthurst claims
7 that “PacifiCorp declined to provide a comprehensive census of low-side metered generators on
8 its system.”¹¹³ To support this claim, Sunthurst cites a discovery request that did not ask
9 PacifiCorp to provide a comprehensive census of low-side metered generators on its system.¹¹⁴
10 Sunthurst ignored the relevant discovery response where PacifiCorp provided a list of all
11 “PacifiCorp owned renewable generators . . . metered on the low side,” and showed that except for
12 one project, every generator was interconnected between 1895 and 1962.¹¹⁵ PacifiCorp reiterated
13 that low-side metering does not reflect current industry practice in a separate discovery
14 response.¹¹⁶ Moreover, the specific examples of low-side metering discussed in Sunthurst’s brief
15 are not comparable to this case and provide no basis to allow Sunthurst to depart from standard
16 practice.¹¹⁷

¹¹¹ See Sunthurst/401, Beanland/29 (explaining that low side metering does not “reflect current industry practice”); see also Sunthurst/401, Beanland/77 (confirming that no solar projects currently interconnected to PacifiCorp’s system use low side monitoring); Sunthurst/401, Beanland/81 (explaining that low-side metering is not consistent with Policy 138); Sunthurst/401, Beanland/82 (stating that low-side metering is not considered good utility practice).

¹¹² Brief at 31.

¹¹³ Brief at 31.

¹¹⁴ See Sunthurst/401, Beanland/77. In this discovery request, Sunthurst specifically asked if “there are other instances where PacifiCorp allows solar projects to meter at the low side.” *Id.*

¹¹⁵ Sunthurst/401, Beanland/6–7.

¹¹⁶ Sunthurst/401, Beanland/29.

¹¹⁷ Brief at 31–34.

1 Sunthurst also claims that allowing low-side metering could reduce costs by up to \$20,000
2 based on Mr. Beanland’s estimate.¹¹⁸ But in discovery, Mr. Beanland could not explain the basis
3 for that estimate and instead estimated cost savings of only \$6,000, excluding labor costs.¹¹⁹

4 **G. By not raising any further arguments in its opening brief, Sunthurst has waived**
5 **all other arguments contained in its complaint and testimony.**

6 Sunthurst has stated that it does not contest PacifiCorp’s latest cost estimates for avian
7 protection, junction boxes, dead-line checking, and “accrued engineering” discussed in its opening
8 testimony.¹²⁰ Sunthurst’s opening brief also does not contest its responsibility for the 0.3-mile line
9 extension required to interconnect its projects, the Direct Transfer Trip requirement, or the
10 Company’s removal of the annunciator panel costs. Therefore, these arguments have been
11 waived.¹²¹

III. CONCLUSION

12 Despite the Commission’s requirement that PacifiCorp’s customers remain indifferent to
13 Sunthurst’s interconnection requests and PacifiCorp’s good faith negotiations for six months
14 regarding the interconnection requirements for both PRS1 and PRS2, Sunthurst continues to push
15 for cost reductions that would degrade the existing service for Company customers and force
16 customers to bear costs resulting from Sunthurst’s interconnection requests. In the process,
17 Sunthurst has consistently mischaracterized Company testimony and discovery responses to assert
18 a false narrative throughout its opening brief. When Sunthurst is not mischaracterizing PacifiCorp
19 evidence, it simply ignores that the Company’s most recent detailed cost estimates for PRS1 and
20 PRS2 reflect the lowest estimated interconnection costs the Company can provide without

¹¹⁸ Brief at 30.

¹¹⁹ PAC/300 at 9.

¹²⁰ Brief at 5–6.

¹²¹ *In re PacifiCorp, dba Pac. Power, 2014 Transition Adjustment Mechanism*, Docket No. UE 264, Order No. 13-387, at 10 (Oct. 28, 2013) (rejecting adjustments that were not addressed in briefing).

- 1 degrading service to its existing customers. All remaining costs included in these estimates are
- 2 reasonable interconnection costs that Sunthurst must pay to interconnect its projects.

Dated: April 13, 2021

MCDOWELL RACKNER GIBSON PC



Adam Lowney
Henrik Strand
419 SW 11th Avenue, Suite 400
Portland, Oregon 97205
Telephone: (503) 595-3925
Facsimile: (503) 595-3928
dockets@mrg-law.com

Matthew Loftus
Senior Counsel
PacifiCorp
825 NE Multnomah, Suite 1600
Portland, OR 97232
Telephone: (503) 813-6642
Matthew.Loftus@PacifiCorp.com

Attorneys for PacifiCorp

**PUBLIC UTILITY COMMISSION
OF OREGON**

UM 2118

PACIFICORP

Exhibit 1

Sunthurst Meeting Notes from June 9, 2020

April 13, 2021

PAC explained, they need one for each job as PPA and unwilling to assume metering from 1-2 poles spans away is accurate of what they get and pay for.

SE team looked at this after call and want PUC to approve 1 PAC meter over both and 1ea rev. grade metering for CSP subscriber reporting for on-bill credits and eliminate the 4-5 switches in PAC's design.

Distribution Line

- 1. Why are branch circuit reclosers needed?

There is a reclosure on the branch in the SIS and Doug looked at this again. Original engineer put this in, for good fault clearance. Don't need it, but if want it will help if. South to Birch Creek, 5 miles and no development.

Cost to remove reclosure- Doug says, cost to remove is \$50-60k range, but said more overhead to consider. Larry pointed out estimate line item is \$255k reclosure and regulator portion.

- 2. Why are branch circuit regulators needed? The SIS indicated no voltage concerns.

PAC stated they have hard time (already) keeping both circuits going North to meet ANSI- Range A. Definitely need both. The key issue serves some of the load on circuit. Load tap changer at the; need to remove the compensation setting and no longer have that functionality.

L- couldn't you setting at generator to assist grid voltage issue? This is possible and forward thinking for system engineering. They seem can take advantage of the generator to compensate for this. To do, PAC would need the right equipment and sole control to implement.

Substation

- 1. Please confirm not additional equipment changes in the substation other than possible regulator control changes.

There needs to be communication equipment in the control station. Assumption- any other power equipment upgrades in Q0666.

Kris just noted, this FSR assumed Q0666 upgrades preceded Q1045 (Appendix 2).

L- Where does the R816 regulator get its voltage measurement from- said PT on the buss; not sure 3P regulator, then regulating 1 Voltage. L- reason asking want to replace 3PT's in the substation if don't have now and putting 3 in; not usually. Dean Miller looked up and said are deadline PT's,

General Operational Control for both Projects

- 1. We would like to discuss the control requirements of the two projects. The SIS and FSR for each project were not clear how the generation was to operate.
 - a. Voltage vs PF control – They are asking for PF – target 1.0 but .95 to .95 is acceptable
 - b. Voltage measurement point; At the POI.
 - i. At the voltage regulator
 - c. Dispatched vs non-dispatched
 - i. Language was 'not a dispatched resource' ; so language of such

Larry C. Gross 6/9/20 7:30 PM
Comment: I think for PAC approval of one meter they would not be involved in the decision for splitting between the two projects. That would be a CSP and PPA issue only. Not sure you would be obligated to tell them how you are doing the split metering if they treat the site as one from a metering perspective. I am not sure this will fly do to Queue and interconnect process issues.

Dan Hale 12/24/20 8:32 AM
Formatted: Highlight

Larry C. Gross 6/9/20 7:44 PM
Comment: I still think there may be a way to better control their substation regulator using data from the Solar projects via the installed fiber. I am looking into this.

Dan Hale 12/24/20 8:32 AM
Formatted: Font:11 pt, Highlight

Larry C. Gross 6/9/20 7:45 PM
Comment: They ultimately want three PTs on the bus and one on the line side of the breaker. If the relays do not need to be directional (next weeks questions) then they technically only need 1 on the bus and one on the line.

Larry C. Gross 6/9/20 7:48 PM
Comment: I think they meant at the Change of ownership since that is where the voltage measurement is, but they said PF not voltage so we need to ask if we use their meter or our recloser control to control the generation

June 9, 2020

Ctd: Dist. Line questions

Q Larry: Why are branch reclosers needed?

- W/DTZ, find recloser not working; but if its there, it will benefit you (long circuit beyond PRS to McKay Res)
(but there is only really about 5 mi of exposure)

approx recloser cost: PAC will find out \rightarrow ~ \$50-100k

Larry G: FSP: Regulators + reclosers \$ 265k.

QD2. Why regulators? PAC we need regulators Lk 114-126V range needed on both taps

PAC: New gen won't help voltage because we don't know when load will need it.

PAC: our load tap changer @ Sub regulates based on load
New Gen will diminish functionality of Substation regulator.

Larry: Why so this needed?

PAC: either we remove car

∴ Larry G: it seems like the generator can ~~also~~ help with voltage issues
you have a controllable voltage source in the generator

\rightarrow PAC: true, if we had ability to control gen voltage.

Substation questions

PAC 1. @ Pilot Rock no other changes needed except in Q0666.

LG: Where does regulator get its voltage? (Potential transformer)

PAC doesn't know

Larry Gross: If you don't have PTs now, how
why do you need 3 PTs?