

CASE: UM 2032
WITNESS: CAROLINE MOORE

**PUBLIC UTILITY COMMISSION
OF
OREGON**

STAFF EXHIBIT 200

Reply Testimony

December 11, 2020

1 **Q. Please state your name, occupation, and business address.**

2 A. My name is Caroline Moore. I am a Chief Analyst employed in the Energy
3 Resources and Planning Division of the Public Utility Commission of Oregon
4 (Commission or OPUC). My business address is 201 High Street SE. Suite
5 100, Salem, Oregon 97301.

6 **Q. Have you previously provided testimony in this case?**

7 A. Yes. I previously sponsored Exhibit Staff/100.

8 **Q. What is the purpose of your testimony?**

9 A. The purpose of my testimony is to clarify Staff's positions and respond to the
10 positions of the Interconnection Customer Coalition (ICC) and NewSun Energy,
11 LLC (NewSun) provided in the Reply Testimony on October 30, 2020.

12 **Q. How is your testimony organized?**

13 A. My testimony is organized as follows:

14	Background.....	2
15	Network Upgrade Cost Allocation for Oregon QFs	6
16	Interconnection Service for Oregon QFs.....	13
17	Conclusions and Staff Recommendations	14

BACKGROUND**Q. Please provide a brief history of this investigation.**

A. The Commission opened an investigation into the treatment of Network Upgrade costs for Qualifying Facilities (QFs) on July 29, 2019.¹ On May 22, 2020, the Administrative Law Judge adopted a scope for the investigation into the treatment of Network Upgrades for QFs, which included the following issues:

1. Who should be required to pay for Network Upgrades necessary to interconnect the QF to the host utility?
2. Should on-system QFs be required to interconnect to the host utility with Network Resource Interconnection (NRIS), or should QFs have the option to interconnect with Energy Resource Interconnection Service (ERIS) or an interconnection service similar to ERIS?

Depending on the resolution of these two questions, a second phase of the docket may be necessary to address a third question:

3. If the answer to Issue No. 1 is that users and beneficiaries of Network Upgrades (which typically are primarily utility customers) should pay for the Network Upgrades necessary to interconnect the QF to the host utility, how should that policy be implemented?²

¹ See Docket No. UM 2000, Commission Order No.19-25.

² See Docket No. UM 2032, ALJ Traci A. G. Kirkpatrick issues Ruling; disposition: issues list adopted.

1 On August 24, 2020, Idaho Power, PacifiCorp, and Portland General
2 Electric (Joint Utilities) filed opening testimony addressing the first two
3 questions. On October 30, 2020, OPUC Staff (Staff), ICC, and NewSun
4 provided Reply Testimony.

5 **Q. What are Network Upgrades?**

6 A. Network Upgrades are a type of interconnection upgrade classified by the
7 Federal Energy Regulatory Commission (FERC) that include additions,
8 modifications, and upgrades to the transmission system at or beyond the point
9 of interconnection with the Transmission Provider's system.^{3,4}

10 **Q. What are NRIS and ERIS?**

11 A. FERC specifies two types of interconnection service in its standard
12 interconnection procedures. The type of interconnection service used can
13 impact the Network Upgrades assigned to a generator during the
14 interconnection process.

- 15 • Energy Resource Interconnection Service (ERIS): basic interconnection
16 service which allows the generator to deliver its output to the
17 Transmission Provider's system on an as-available basis. Does not
18 consider the delivery of generation to an end point.⁵
- 19 • Network Resource Interconnection Service (NRIS): a more
20 comprehensive interconnection service that allows the generator to
21 deliver its output to load on a firm basis. Under NRIS, the System

³ FERC Pro Forma Large Generator Interconnection Procedures (FERC LGIP), p. 5-6.

⁴ FERC Pro Forma Small Generator Interconnection Procedures (FERC SGIP), Attachment 1, p. 2.

⁵ FERC LGIP, p. 14.

1 Operator is supposed to treat the generator in the same way that it
2 integrates its own resources to serve its native load customers. An NRIS
3 interconnection study considers ERIS and whether the aggregate of
4 generation in the area where the interconnecting generator sited its
5 project can be reliably delivered to the aggregate of load during peak
6 conditions.⁶

7 **Q. Please summarize parties' positions in this the first round of**
8 **testimony.**

9 A. In Opening Testimony, the Joint Utilities argue that QFs should continue to
10 bear the cost of Network Upgrades without reimbursement. The Joint Utilities
11 propose this approach so that ratepayers remain indifferent to the cost of
12 interconnecting QFs and to encourage efficient siting of QFs. The Joint Utilities
13 also argue that QFs should continue to interconnect under NRIS to avoid
14 shifting deliverability costs to ratepayers.

15 Conversely, ICC and NewSun (collectively "QF Parties") argue that the
16 Commission should assume that all Network Upgrades provide system-wide
17 benefits and, therefore, should be borne by all users of the system via the
18 Transmission Provider. The QF Parties also assert QFs should have the option
19 to select NRIS or ERIS based on their business objectives.

20 Staff proposes that QFs, retail ratepayers, and other users of the system
21 should share the costs of Network Upgrades proportionally to the benefits the

⁶ FERC LGIP, pp.14-15.

1 Network Upgrades provide. Staff also believes that NRIS is the most practical
2 interconnection service for QFs from a cost allocation perspective.

NETWORK UPGRADE COST ALLOCATION FOR OREGON QFS*SUMMARY OF STAFF'S POSITION***Q. Please summarize Staff's initial proposal for the allocation of Network Upgrade costs for QFs.**

A. In Reply Testimony, Staff proposes that Network Upgrade costs that exceed the utility's avoided Network Upgrade costs should be allocated to QFs and other users of the transmission system commensurately with the benefits that the Network Upgrades provide. From Staff's perspective, this approach is consistent with the Commission's existing guidance, but has not been implemented by the utilities.⁷

Q. Did Staff propose a specific mechanism to implement this cost allocation approach?

A. No. Staff describes the pros and cons of several mechanisms to implement this cost allocation methodology, but recommends that implementation be explored further. Specifically, Staff recommends that parties explore avoided Network Upgrade costs in Docket No. UM 2000 and mechanisms to compensate QFs for any system-wide benefits in Phase II of this investigation.⁸

Q. Is Staff open to other implementation approaches?

A. Yes. Staff suggests addressing avoided Network Upgrade costs and system-wide benefits separately because there are existing investigations into utilities' avoided costs. It would also be reasonable to implement a mechanism that

⁷ Staff/10, Moore/19-22.

⁸ Staff/100, Moore/35.

1 considers both avoided Network Upgrade costs and system-wide benefits
2 together in the interconnection process.

3 If the Commission adopts a different cost allocation approach than its
4 current guidance, it should still include protections that limit the amount of QF
5 Network Upgrades that could be borne by ratepayers.⁹

6 *SUMMARY OF QF PARTIES' POSITIONS*

7 **Q. Please summarize the QF's parties' proposals to allocate Network
8 Upgrade costs for QFs.**

9 A. ICC and NewSun argue that all Network Upgrades benefit all users of the
10 system. Therefore, Network Upgrades should be paid for by all users of the
11 system.^{10, 11}

12 NewSun expresses concern that Oregon is an outlier with respect to
13 interconnection policy because Oregon deviates from FERC policy. NewSun
14 describes Oregon's current policy as discriminatory, and lists a range of
15 system-wide benefits associated with Network Upgrades, including increased
16 system capacity, robustness, reliability, flexibility, and the need to expand
17 transmission capacity to meet the State's latest greenhouse gas reduction
18 goals.¹² NewSun also suggests that the Transmission Provider is the ultimate
19 beneficiary of Network Upgrades because they are able to roll them into

⁹ Staff Exhibit 105.

¹⁰ ICC/100, Lowe/11-12.

¹¹ NewSun/100, Rahman/11-13.

¹² NewSun/100, Rahman/11; NewSun/200, Andrus/15, 18.

1 transmission rate base.¹³ Therefore, NewSun believes that the Transmission
2 Provider is ultimately responsible for funding the cost of Network Upgrades.¹⁴

3 ICC criticizes the Joint Utilities for not developing a reasonable
4 mechanism to compensate QFs for the system-wide benefits of Network
5 Upgrades over the past decade.¹⁵ ICC concedes that there could be Network
6 Upgrades that do not benefit all users and finds a cost-sharing mechanism
7 between QFs and transmission users an acceptable alternative.¹⁶

8 Both parties also note that, if the Commission continues to require a
9 demonstration of system-wide benefits, the burden should be on the
10 Transmission Provider to prove that an upgrade does not have system-wide
11 benefits and should not be borne by all users of the system.^{17,18} The QF
12 Parties argue that utilities are non-independent transmission providers and
13 have no incentive to identify cost-effective Network Upgrades for independent
14 power producers. In addition, the utilities are advantaged by information
15 asymmetry, while QFs have fewer resources and lack the access to
16 transparent information about the transmission system required to bear the
17 burden of proof.

18 **Q. How does Staff respond to the QF Parties' proposal?**

¹³ NewSun/100, Rahman/13.

¹⁴ NewSun/100, Rahman/10.

¹⁵ ICC/100, Lowe/13.

¹⁶ ICC/100, Lowe/15.

¹⁷ ICC/100, Lowe/19-20.

¹⁸ NewSun/200, Andrus/15-16.

1 A. Staff appreciates the thoughtful discussion of the interconnection barriers
2 facing Oregon QFs and shares their concerns with the utilities' current
3 treatment of Network Upgrades for QFs. That said, Staff still believes that
4 FERC's bright line approach exposes ratepayers to unreasonable risk of cost
5 shifting.¹⁹

6 First, neither ICC nor NewSun provide evidence to support the
7 assumptions that all Network Upgrades provide system-wide benefits and that
8 those benefits are commensurate with the costs that would be allocated to the
9 users of the transmission system. The lack of evidence is significant in this
10 case because retail ratepayers would bear a significant portion of the costs of
11 the QF Network Upgrades under this approach. As mentioned in previous
12 testimony, QF Network Upgrade costs have the potential to exceed hundreds
13 of millions of dollars and ratepayers are the largest transmission customer of
14 each utility, responsible for 70-87 percent of utilities' transmission revenue.²⁰

15 Second, QFs are not users of the transmission system from a cost
16 responsibility perspective and do not contribute to Network Upgrade costs that
17 are rolled into the rates of the Transmission Provider. This puts the QF Parties
18 proposal at odds with the idea that all users of the system should share the
19 costs and benefits of QF Network Upgrades.²¹

20 Third, under Oregon's planning and procurement processes, utilities,
21 stakeholders, and Staff weigh the all-in costs and benefits of available resource

¹⁹ Staff/100, Moore/23-25.

²⁰ Staff/100, Moore/20, 24.

²¹ ICC/100, Lowe/10.

1 options (including Network Upgrades) before utilities bring FERC-jurisdictional
2 facilities online. These choices are reviewed again in a ratemaking proceeding
3 before being borne by ratepayers. The same is not necessarily true for QFs.
4 Staff finds it reasonable for Oregon to not use FERC's bright-line rule, which
5 would allocate the costs of any Network Upgrade to retail ratepayers without
6 consideration for the cost-effectiveness. As the Joint Utilities point out, it is
7 important to encourage the efficient siting of QFs from a Network Upgrade
8 perspective.²²

9 Finally, Staff agrees with NewSun that expanding the capacity of the
10 transmission system is likely required to meet the state's greenhouse gas
11 reduction goals. However, it is important to note that the Governor specifically
12 directed the Commission to do so at a reasonable cost.²³

13 **Q. Does the opportunity for Transmission Providers to prove that a**
14 **Network Upgrade does not have system-wide benefits alleviate Staff's**
15 **concerns about ratepayer indifference?**

16 A. Staff finds many of the QF parties' arguments in support of placing the burden
17 to show a Network Upgrade does not have system-wide benefits are
18 compelling. Staff's concern is the practicality of this approach. Through this
19 investigation, it is becoming increasingly clear 1) how difficult it is to quantify
20 system-wide benefits of QF upgrades; and 2) why other jurisdictions rely on
21 standardized cost allocation policies. Given the utilities' advantages, incentives,

²² Joint Utilities/100, Vail-Bremer-Foster-Larson-Ellsworth/5.

²³ Office of the Governor of the State of Oregon, Exec. Order No. 20-04, March 10, 2020, p. 8.

1 and current “but for” approach to identifying system-wide benefits, Staff is
2 concerned that assigning the burden of proof to Transmission Providers would
3 result in even greater disputes, delays, and uncertainty.

4 **Q. Does Staff have an alternative proposal for a cost allocation policy that**
5 **limits cost-shifting to ratepayers and minimizes disputes and delays?**

6 A. The Commission could balance fairness with practicality by adopting a two-
7 step cost-sharing formula:

- 8 • Step 1: Establish an avoided Network Upgrade cost per utility.
9 Ratepayers cover the QF’s Network Upgrade costs up to this amount.
- 10 • Step 2: For any Network Upgrade costs above the utility’s avoided
11 Network Upgrade costs in Step 1, hold the QF responsible for 75 percent
12 and the Transmission Provider for the remaining 25 percent.

13 **Q. That sounds more complex than the FERC policy. What are the**
14 **advantages?**

15 A. The advantages of this approach are that it 1) is rooted in PURPA’s ratepayer
16 indifference standard; and 2) balances the incentive for QFs to site efficiently
17 with an incentive for non-independent Transmission Providers to identify the
18 most cost-effective interconnection upgrades for independent power producers.

19 Further, if the Commission finds that the two-step approach is too
20 complex, it could adopt a one-step cost-sharing formula that approximately
21 captures both the avoided Network Upgrade costs and the additional benefits
22 of expanding the capacity of the system to deliver additional renewables from

1 areas with strong renewable capacity to network load. Parties could establish
2 this in Phase 2 of this docket.

3 **Q. Are there examples of other jurisdictions adopting a fixed-percentage**
4 **cost sharing policy?**

5 A. Yes. The Idaho Cassia Test referenced in Staff and ICC's previous testimony is
6 one example.^{24, 25}

7 **Q. Does Staff have any additional responses to the QF Parties'**
8 **testimony?**

9 A. Yes. Staff disagrees with NewSun's description of Oregon's treatment of
10 Network Upgrades for QFs as an outlier in the region. It's Staff's understanding
11 that many western states, including Washington and Utah, require QFs to bear
12 Network Upgrade costs.^{26, 27} As mentioned in previous testimony, Idaho holds
13 a similar policy, but has applied a percentage cost sharing to specific projects
14 with system-wide benefits.²⁸ Finally, Staff also believes that Montana requires
15 QFs to bear Network Upgrade costs above the utility's avoided Network
16 Upgrades.²⁹

²⁴ Staff/100, Moore/25-26.

²⁵ ICC/ 100, Lowe/15.

²⁶ *Application of Rocky Mountain Power for the Approval of Power Purchase Agreement* (Utah Public Service Commission Docket No. 17-035-26), 2017 WL 6731656 (December 22, 2017) ("The P.S.C. is responsible for ensuring . . . interconnection costs [as FERC defines them] are assessed to QFs.")

²⁷ Washington Administrative Code § 408-107-125 ("Any costs of interconnection are the responsibility of the owner or operator of the generating facility entering into a power contract under this chapter.")

²⁸ Staff/100, Moore/25-26.

²⁹ *In the Matter of the Petition of Kenfield I* (Montana Public Service Commission Docket No. D2010.2.18), Order No. 7068b (June 22, 2010)(holding QFs are responsible for interconnection costs that exceed the purchasing utility's avoided interconnection costs).

INTERCONNECTION SERVICE FOR OREGON QFS

1
2 **Q. Please summarize the QF Parties' testimony related the**
3 **interconnection service**

4 A. Both ICC and NewSun suggest that QFs should have the option to select NRIS
5 or ERIS based on their business objectives.³⁰ By taking ERIS, QFs could
6 voluntarily agree to less-than-firm deliverability in order to avoid expensive
7 deliverability driven upgrades.³¹ As noted by NewSun, this would not only
8 remove an insurmountable barrier for many QF generators, it would allow the
9 Transmission Provider to avoid making unnecessary transmission upgrades.³²

10 **Q. Does Staff agree with the QF Parties' proposal?**

11 A. To the extent that it's allowed under PURPA's mandatory purchase obligation,
12 Staff supports the QF Parties' proposal. That is, Staff agrees that this flexibility
13 can benefit ratepayers and QFs *if* the QF selecting ERIS also enters into a
14 non-standard contract, forgoes network resource status, and accepts
15 curtailment provisions in exchange for fewer deliverability-driven upgrades.

16 As noted in previous testimony, there are practical advantages to
17 requiring QFs to take NRIS if Network Transmission service is necessary to
18 deliver the QF's output to load.³³ This is because NRIS provides the
19 Commission more discretion over the cost allocation of Network Upgrades
20 required to deliver QF output to native load on a firm basis.

21

³⁰ NewSun/100, Rahman 18; NewSun/300, Bunge/2-6; ICC/100, Lowe/22-26.

³¹ NewSun/100, Rahman/16-18; ICC/100, Lowe/25.

³² NewSun/100, Rahman/18.

³³ Staff/100, Moore/32-33.

CONCLUSIONS AND STAFF RECOMMENDATIONS**Q. Please summarize Staff's current position on the treatment of Network Upgrades for Oregon QFs.**

A. Staff's position has not materially changed since its October 30, 2020 Reply Testimony. Staff still finds that QFs should be responsible for Network Upgrades above the utilities avoided Network Upgrade costs and compensated for any additional system-wide benefits. Staff also upholds that NRIS is the most practical interconnection service for QFs. After considering QF Parties' positions, Staff is open to other approaches that implement Staff's proposed policies in a more practical manner:

- The Commission could adopt a two-step cost-allocation formula that tackles avoided Network Upgrade costs and system benefits in the interconnection process. If this is found to be too complex, the Commission should consider adopting a one-step cost allocation formula that approximates the two-step process.
- Subject to legal considerations, it may be in the interest of QFs and ratepayers to allow QFs to select ERIS in exchange for the following requirements:
 - Forgoing network resource status;
 - Accepting voluntary curtailment provisions; and
 - Entering into a non-standard contract.

1 **Q. Does this conclude your testimony?**

2 A. Yes.