

CASE: UG 435
WITNESS: MATT MULDOON

**PUBLIC UTILITY COMMISSION
OF
OREGON**

**STAFF EXHIBIT 1800
REDACTED**

**All Confidential and Highly Confidential Material
Is Redacted**

**Rebuttal Testimony:
Public Comments Received,
Renewable Natural Gas, Hydrogen, and
Residential Line Extensions**

June 30, 2022

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

2 A. My name is Matt Muldoon. My position is Manager of Energy Rates and
3 Finance of the Rates Finance and Audit (RFA) Division of the Public Utility
4 Commission of Oregon (OPUC). My business address is 201 High Street SE,
5 Suite 100, Salem, Oregon 97301.

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

7 A. Yes. Please see Exhibits Staff/100, and Staff/1700 for my opening testimony.

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

9 A. I address remaining issues in this general rate case:

10 First, I summarize public comments received by the Commission.

11 I then consider cost recovery and rate spread for the Lexington
12 Renewable Gas (RNG) Project and associated intervenor testimony in Exhibits
13 AWEC/100, Coalition/100, and CUB 200. In addition, I examine the
14 Company's proposed Automatic Adjustment Clause (AAC) mechanism for
15 RNG and NW Natural's proposed upgrade to Schedule 198, which intervenors
16 also spoke to in Exhibits AWEC/100, and CUB/200. NW Natural replied to
17 intervenor's concerns and suggestions regarding the Lexington RNG project in
18 Exhibits NWN/2100 Chittum, and NWN/2300 Walker; and regarding an RNG
19 AAC in Exhibit NWN/1600.

20 Finally, I address residential line extension policy, earlier discussed in
21 Exhibits CUB/100, Coalition/100, and Coalition/200; to which NW Natural
22 responded in Exhibit NWN/1800.

23

1 **Q. Did you prepare any supporting exhibit for this docket?**

2 A. Yes. I prepared Exhibit Staff/1801, containing an article highlighting some of
3 the challenges even a very large company supported with federal loan
4 guarantees can face in participating in a green hydrogen renewable energy
5 mega-hub.

6 **Q. Will other Staff witnesses submit testimony regarding the issues they**
7 **reviewed?**

8 A. No. Staff provides just this 1800 series Rebuttal Testimony.

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

10 A. My testimony is organized as follows:

11	Issue 1. Summary of Public Comments Received	3
12	Issue 2. Lexington RNG Project	6
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ISSUE 1. SUMMARY OF PUBLIC COMMENTS RECEIVED

Q. Please summarize the public comments received to date in this rate case.

A. This case has produced a very large number of public comments. In its Opening Testimony, Staff reviewed 951 public comments (hereinafter referred to as "Comments") received up to April 10, 2022. Since then, the Commission has received an additional 76 Comments giving us the cumulative totals for the docket shown below through June 22, 2022:

For Increase	Against Increase	Form Comments	Request Additional PM's	Total Comments as of 4/10/2022
0%	100%	828	199	1027

Docket No. UG 435's public comments reflect passionate opposition to a rate increase from NW Natural. This increase request as noticed includes an 11 percent rate increase for residential customers. 100 percent of the comments are in opposition to the rate increase, and range in intensity. The Commission received comments from non-profit organizations including:

1. Sierra Club;
2. Northwest Environmental Defense Center;
3. Metro Climate Action;
4. Oregon Physicians for Social Responsibility, and
5. Benefit Corporations for Good.

The major themes of the comments are:

1. Climate change is a huge issue for Oregon and the world, and investing in natural gas and fossil fuel infrastructure is a bad investment. The money should be used instead to switch to renewable energy sources;
2. Ratepayers should not have to pay for executive salary increases and

1 bonuses. NW Natural has excellent profits, and the executives make
2 huge salaries. Ratepayers are struggling financially due to the state of
3 the world, inflation, and the COVID-19 pandemic and should not have to
4 pay for these increases;

5 3. Rate increases will disproportionately impact vulnerable communities
6 including senior citizens on fixed incomes, people of color, and low-
7 income households;

8 4. NW Natural had a rate increase in November of 2020 and having another
9 double-digit rate increase this year is more than customers of Oregon
10 energy utilities can handle given the relatively lower rate of customer
11 wage increases; and,

12 5. Advertising is an inappropriate use of customer funds because
13 NW Natural is a monopoly. The advertisements utilize greenwashing to
14 encourage the public to believe that natural gas is a clean energy source.
15 There should not be advertisements for an energy source that should be
16 phased out as soon as possible.

17 **Q. How may interested persons view these Comments?**

18 A. The Commission will post a link or instructions on how the public can see all
19 public comments received, including those from the edited transcript for the
20 Public Informational Hearing, of Thursday, March 10, 2022, at:
21 <https://apps.puc.state.or.us/edockets/DocketNoLayout.asp?DocketID=23085>.

22 This is the last testimony in which Staff will be able to address Public
23 Comments received in this general rate case. However, the Company may

1 respond to Staff's summary of the Comments or to the Comments themselves
2 in subsequent evidentiary testimony.

3 **Q. Does Staff testimony address comments received through**
4 **June 22, 2022?**

5 A. Yes.

1 [REDACTED]

2 [REDACTED]

3 [REDACTED]

4 [REDACTED]

5 [REDACTED]

6 [REDACTED] [END HIGHLY CONFIDENTIAL]

7 **Q. How do lowered production and the increase in forward natural gas price**
8 **curves impact the revenue requirement for the Lexington RNG project?**

9 A. [BEGIN CONFIDENTIAL] [REDACTED]

10 [REDACTED]

11 [REDACTED]

12 [REDACTED] [END CONFIDENTIAL]⁵ As noted in NWN/2300 Walker-

13 Wyman/3, lines 16-17, the overall revenue requirement for the Lexington RNG
14 project has declined.

15 **Q. What is Staff's position on the prudence of the Lexington RNG project?**

16 A. Staff generally concludes the costs for developing and operating the Lexington
17 RNG facility appear prudent. On the one hand, in developing its first
18 geographically remote from Oregon RNG project, Staff sees the Company as
19 selecting possibly overly complex business relationships that minimized risk to
20 NW Natural Holding Company, though not necessarily minimizing cost and risk
21 to Oregon ratepayers of the regulated utility. On the other hand, the Lexington

³ See NWN/2100, Chittum/17-18.
⁴ See NWN/2100, Chittum/20.
⁵ See NWN/2301, Walker-Wyman/1-2.

1 RNG project satisfies the parameters established in Senate Bill (SB) 98 (2019)
2 for an eligible investment in renewable natural gas. NW Natural is authorized
3 by SB 98 to invest in renewable natural gas to meet the legislatively
4 established portfolio target for same. SB 98 also specifies that the
5 Commission should establish a Renewable Natural Gas program and that
6 utilities should recover prudent utility investments to meet the SB 98 portfolio
7 targets. Furthermore, the Commission has already approved a stipulation in an
8 affiliated interest docket that provides some protection to customers for the
9 transactions related to this investment.

10 **Q. Please describe the docket and stipulation?**

11 A. Docket No. UI 451 concerned NW Natural's request for approval of an affiliated
12 interest agreement with Lexington Renewables, LLC. Commission Order No.
13 22-211 adopted a stipulation resolving the issues in that docket and provided
14 some controls regarding the affiliated interest relationship between Lexington
15 and NW Natural, to protect utility customers. An example of a control is a
16 performance expectation for cost recovery and a market price cap.⁶

17 **Q. How does the Commission's order in UI 451 influence Staff's thinking?**

18 A. Staff is satisfied that NW Natural customers are protected from significant risks
19 associated with the Lexington RNG investment. Given this and given that the
20 legislature has found that renewable natural gas, "provides benefits to natural
21 gas utility customers and to the public" and has established a portfolio target

⁶ *In the Matter of Northwest Natural Gas Company dba NW Natural, Request for Approval of an Affiliated Interest Agreement with Lexington Renewables, LLC., Docket No. UI 451, Order No. 22-211, p. 2 (June 6, 2022).*

1 for renewable natural gas investments, Staff concludes that NW Natural's
2 decision to invest in the Lexington RNG satisfies the Commission's standard
3 for prudent investment.

4 **Q. What do the other parties to UG 435 state about the Lexington RNG**
5 **investment?**

6 A. The Coalition for the Communities of Color (Coalition) recommends the
7 Commission reject NW Natural's proposal to recover the costs of the Lexington
8 RNG project because it is not prudent. In support of this recommendation, the
9 Coalition testifies that acquisition of the Renewable Thermal Certificates
10 (RTCs) associated with the production of renewable natural gas as opposed to
11 the gas itself is not contemplated by SB 98.⁷ They also assert the investment
12 is imprudent because it cannot not help NW Natural satisfy the emission
13 reductions required by Climate Protection Plan (CPP) adopted in 2021.⁸

14 **[BEGIN HIGHLY CONFIDENTIAL]** [REDACTED]

15 [REDACTED]

16 [REDACTED]

17 [REDACTED]

18 [REDACTED]

19 [REDACTED]

20 [REDACTED]

21 [REDACTED]

⁷ Coalition/100, Apter/17-20.

⁸ Coalition/100, Apter/19-20.

1 [REDACTED]

2 [REDACTED]

3 [REDACTED]

4 [REDACTED]

5 [REDACTED]

6 [REDACTED]

7 [REDACTED]

8 [REDACTED]

9 [REDACTED]

10 [REDACTED]

11 [REDACTED]

12 [REDACTED]

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⁹ AWEC/100, Mullins/35-36.

1 [REDACTED]
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18 [REDACTED]
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20 [REDACTED]

¹⁰ AWEC/100, Mullins/36.
¹¹ AWEC/100, Mullins/36-37.
¹² NW Natural/2100, Chittum/19.
¹³ *Id.*

1 [REDACTED]
2 [REDACTED]
3 [REDACTED]
4 [REDACTED]
5 [REDACTED]
6 [REDACTED]
7 [REDACTED]. [END HIGHLY CONFIDENTIAL]

8 **Q. The Coalition has expressed concern that there is not enough RNG and**
9 **hydrogen to decarbonize NW Natural’s network.¹⁵ Does Staff Agree?**

10 A. Staff agrees with the Coalition that RNG and hydrogen alone are insufficient to
11 achieve decarbonization. Staff sees that multiple cost- and risk-effective
12 initiatives in the aggregate are more likely to be a viable solution than
13 concentrated reliance on a single effort.

14 A consistent theme is that as one tries to approach 100 percent
15 renewables through concentration on a single approach, the cost becomes
16 greater and greater, until it may no longer practicable. This is referred to in
17 economics as diminishing returns. For this reason, Staff believes that
18 practicable solutions to meet Oregon’s environmental goals likely will need to
19 rely on multiple approaches including energy efficiency.

20 **Q. Are hydrogen projects likely to have as much uncertainty as RNG?**

21 A. Initially, no, for the following reasons:

¹⁴ See AWEC/100, Mullins/37-38.
¹⁵ See Coalition/100, Apter/15.

- 1 1. Current efforts to blend hydrogen in Oregon’s natural gas supply have
2 targets lower than those achieved in other jurisdictions;¹⁶
- 3 2. The Company is partnering with competent entities like the Eugene Water
4 and Electric Board (EWEB) and the Bonneville Environmental Foundation
5 that can help shoulder costs and risks in hydrogen projects centered on
6 electrolyzers to convert water to hydrogen and oxygen;¹⁷ and,
- 7 3. Geographically proximate hydrogen projects delivering physically and
8 geographically to Oregon can back off brown natural gas to achieve more
9 tangible Oregon-centric benefits than geographically remote RNG
10 operations which are not practical to physically and geographically deliver
11 RNG (other than notionally) to Oregon to back off brown gas here.

12 However, participation in large scale remote hydrogen hub projects bears
13 significant risk even to the largest participants, and even when backed by U.S.
14 DOE loan guarantees.¹⁸

15 **Q. The Company emphasizes that surveys performed five years ago as**
16 **relied on by the Coalition have not kept up with the rapid pace of RNG**
17 **development. Does Staff agree there has been an acceleration in the**
18 **number of RNG projects?**

19 A. Yes. As Staff discussed in Exhibit Staff/1700 Muldoon, California programs
20 massively upgraded the relative environmental rankings of certain RNG

¹⁶ See NWN/1704, Heiting-Bracken/79 where the Company estimates that up to 20 percent hydrogen injection may be feasible and safe.

¹⁷ See NWN/1700, Heiting-Bracken/58.

¹⁸ See Staff/1801 Muldoon/1 for “Chevron Pulls Out of Utah Hydrogen Hub Backed by DOE” by Siri Hedreen – S&P Global Market Intelligence – Jun. 24, 2022.

1 facilities. This is particularly pronounced in anaerobic digester upgrades to
2 livestock and dairy farms' manure lagoons to produce RNG credited into the
3 California Clean Fuels Program.¹⁹

4 **Q. The Coalition and CUB also question whether RNG is available at a**
5 **reasonable cost.²⁰ The Company disagrees based on certain reference**
6 **benchmarks. Can they all be right?**

7 A. Yes. NW Natural makes a valid set of points generally stating its RNG projects
8 are competitively priced to other energy products and renewable alternatives.
9 However, competitively priced or not, the Coalition and CUB question whether
10 regular people, who are Oregon utility customers, can afford such
11 extravagantly priced renewables.

12 Consider for example the electric vehicle (EV), Mercedes EQS sedan
13 starting at \$102, 310.²¹

14 Mercedes Benz makes likely valid points that this car is a great value
15 compared to other high performance luxury EVs, such as in comparison with
16 the Cadillac Celestiq EV starting at over \$200,000. That does not mean the
17 average Oregon energy utility customer can readily afford one of these
18 vehicles. The relative value proposition does not necessarily provide the
19 wherewithal to acquire all that would be nice to have.

¹⁹ See "California clean fuel standard sparks renewable gas boom in Midwest" by Frank Jossi of Energy News Network published on May 13, 2021 and available at: [Calif. clean fuel standard sparks Midwest RNG boom | Energy News Network](#).

²⁰ See Coalition/100, Apter/16, CUB/100, Jenks/5, and CUB/102, Jenks/4.

²¹ See [All Vehicles | Mercedes-Benz USA \(mbusa.com\)](#) for a comparison of the benefits of this vehicle verses competitor performance EV's.

1 The risk herein is that cost of RNG can incrementally raise Oregon
2 energy utility customers' bills faster than the rate of household income
3 increases. In that case, CUB is correct that RNG costs may not be
4 sustainable.

5 **Q. The Coalition is concerned that methane leaks will negate RNG**
6 **environmental benefits.²² The Company disagrees, citing its**
7 **performance record. Does Staff find the Coalition argument**
8 **compelling?**

9 A. No. Many concerns about methane leakage are better targeted to other
10 utilities that have not undergone the extensive modernization that NW Natural
11 has.

²² See Coalition/100, Apter/16 and NWN/1700, Heiting-Bracken/65.

RATE SPREAD FOR THE LEXINGTON RNG PROJECT

Q. NW Natural's initial proposed rate spread for the Lexington RNG

Project was to spread costs on an equal cents per therm basis to all sales and transportation customers. CUB agreed with the Company on some issues, but proposed to allocate these costs to all customers except storage, including special contract customer.²³ How does Staff respond?

A. Staff agrees with CUB because its proposal follows cost allocation principles.

Staff has yet to see evidence that one Oregon utility customer class receives greater benefit than another with regard to an initiative with the characteristics of the Lexington RNG project.

Q. Has the Company shifted its position from its initial filing?

A. Yes. NW Natural now also agrees with CUB and has modified its stance from the Company's initial filing. The Company also agrees with CUB that the Oregon CPP rules make NW Natural the single point of regulation for all emissions associated with customers taking natural gas service on NW Natural's distribution system.

Q. AWEC proposes that costs of the Lexington RNG project not be allocated to transportation customers and that for the other customers, costs should be allocated on an equal percent of margin basis.²⁴ What are Staff's positions on these proposals?

²³ See CUB/200, Gehrke/42, 46 and NWN/2300, Walker-Wyman/4.

²⁴ See AWEC/100, Mullins/33 and NWN/2300, Walker-Wyman/5.

1 A. AWEC argues that SB 98 provides no authority to allocate investments made
2 under that law to transportation customers.²⁵ AWEC also asserts that since
3 NW Natural contracted for the Lexington RNG project prior to the adoption of
4 HB 2021, NW Natural cannot rely on compliance with CPP as a benefit that
5 warrants spreading the costs to transportation customers.²⁶

6 Staff believes transportation customers should be allocated costs of the
7 Lexington RNG project and does not agree with AWEC's interpretation of SB
8 98, which Staff will address AWEC's arguments in briefs. Staff acknowledges
9 that equal percent of margin basis is often used as a cost allocation
10 methodology between engaged parties in Oregon regulatory proceedings. But
11 at this time, Staff believes CUB has the stronger argument.

12 **Q. Has Staff lingering concerns that the Lexington RNG project is not an**
13 **ideal template on which to scale up RNG development.**

14 A. Yes. Staff does not see the Lexington RNG project framework as a
15 streamlined, efficiently optimized template ready for duplication to bring new
16 RNG online in ways to maximally benefit Oregon utility customers at least cost
17 and risk. Rather Staff sees the Lexington RNG project as having exceedingly
18 complex business relationships and dynamics, as well as incremental costs
19 related to being remotely managed by third parties that require incentives and
20 risk controls.

²⁵ AWEC/100, Mullins/33-34.

²⁶ *Id.*

1 Further, remote geographic delivery of natural gas into interstate pipelines
2 with no cost-effective or practical way to transport RNG to Oregon to back off
3 current Oregon brown gas consumption or to create an RNG business cluster
4 geographically centered in Oregon eliminates some of the value RNG could
5 bring to Oregonians. Staff would rather see NW Natural develop the expertise
6 to bring each RNG project along at successively lower unit costs due to the
7 learning derived from overcoming startup challenges in prior projects
8 completed.

9 **Q. If the Company represents it has gained learning and is in the process**
10 **of gaining core competencies in RNG development and operations,**
11 **why are Staff's concerns still valid?**

12 A. NW Natural indicates that it intends to acquire a diverse portfolio of RNG
13 facilities. If each of these is distinctly different and purchased through myriad
14 external parties, and even operated by external parties requiring incentives for
15 performance, then hoping that many diverse (geographically remote to Oregon)
16 contractors will prioritize cost and risk control for the benefit of Oregon utility
17 customers may be overly optimistic.

18 And where there are opportunities to construct similar facilities such as
19 with Tyson Foods, Staff has not to date heard that with each successive similar
20 project after the Lexington RNG project, the Company expects to become more
21 knowledgeable, more hands-on, and better able to reduce risk and costs.
22 Staff's fear is that instead of going in that direction, NW Natural would
23 contemplate replicating the Lexington RNG approach with near identical

1 partners, each requiring incentives and risk mitigation assurances, and in the
2 process not achieve efficiencies expected as when competitive businesses
3 learn.

4 Staff accepts that Lexington RNG project as the first out of the gate would
5 have some startup challenges and inefficiencies. Staff stops short of AWEC's
6 position regarding the contract between NW Natural and BioCross. But for
7 subsequent projects, AWEC's concerns and expectations for greater
8 efficiencies are valid.

9 **Q. Please recap Staff's recommendation regarding rate spread for the**
10 **Lexington RNG project costs.**

11 A. Staff recommends the Commission find costs for the Lexington RNG project
12 prudent and adopt CUB's recommendation to spread costs on an equal cents
13 per therm basis to all sales and transportation customers including special
14 contract customers. The only exclusion would apply to storage customers.

ISSUE 3. AAC FOR RNG PROJECTS

1
2 **Q. NW Natural has proposed a new tariff, Schedule 198, with a RNG AAC.**
3 **CUB supports an AAC and has provided recommended modifications**
4 **to the structure proposed by NW Natural. Conversely AWEC argues**
5 **that Schedule 198 would not be necessary as general rate cases,**
6 **deferrals and other current regulatory mechanisms already provide for**
7 **recovery of prudently incurred costs of qualified investments in RNG**
8 **infrastructure.²⁷ What is Staff's position?**

9 A. Staff believes AWEC makes good points, however Staff supports a RNG AAC,
10 in part for the efficiencies it can offer. Staff generally agrees with CUB's
11 proposal but would look for:

- 12 1. NW Natural to make a supplemental filing updating Operations and
13 Maintenance (O&M) costs on August 1 of each year.
- 14 2. New projects to be addressed in rate filings in February of each year and
15 must be expected to be operational before October 1, which is 31 days
16 before an RNG AAC effective date of November 1 each year. Most
17 information should be known in February filings. This framework would
18 give parties several weeks to review compliance filings and be assured a
19 project is online before included in rates.
- 20 3. The Commission to reject NW Natural's proposal to allow rate changes
21 on a date other than November 1 and to adopt CUB's proposal to have
22 RNG AAC Rate change occur ONLY on November 1 of each year.

²⁷ See AWEC/100 Mullins/39.

- 1 4. As CUB proposes, no deferrals between when a project comes online
2 and when it is included in rates as the Company can work to time its
3 projects to come online by October 1;
- 4 5. If the Commission decides to authorize deferrals, ROE on deferrals
5 should be the Commission Authorized ROE minus 100 basis points (bps)
6 as such a mechanism reduces risk to the Company.
- 7 6. For true-up between forecast and actuals, Staff recommends a deadband
8 of +/- 50 basis points to incent the company to operate efficiently.

9 **Q. The Company argues that an AAC ensures that RNG costs are**
10 **recovered in a timeframe that is consistent with customers receiving**
11 **immediate benefits of RNG projects.²⁸ Is that consistent with Staff's**
12 **thinking?**

13 A. Intergenerational equity is one of Staff's cost causation principles. Generally,
14 Staff agrees that the utility customers receiving benefits today should be those
15 who pay for said service.

16 **Q. AWEC argues that there are few if any procedural benefits to an AAC**
17 **through Schedule 198.²⁹ CUB and the Company see efficiencies,**
18 **though from different perspectives.³⁰ What is Staff's perspective?**

19 A. Staff anticipates procedural efficiencies if CUB and Staff modifications to the
20 Company's proposed Schedule 198 are authorized by the Commission.

²⁸ See NWN/1600, Kravitz/26.

²⁹ See AWEC/100, Mullins/40.

³⁰ See CUB/200, Gehrke/25, 27 and NWN/1600 Kravitz/25.

1 Giving the Company the flexibility it proposes in its Schedule 198 could
2 greatly diminish or eliminate procedural efficiencies. Staff contends that NW
3 Natural's statement that the "Schedule 198 process is faster than a rate case",
4 is only true if the AAC structure utilizing Schedule 198 is predictable and
5 routine.³¹ Staff recommends the Commission give the Company's argument
6 for flexibility, including rate changes other than on November 1 of each year no
7 weight, as such variance would defeat the necessary efficiencies that would
8 make a RNG AAC preferable to simply addressing prudently incurred RNG
9 expense in the next general rate case with some modest regulatory lag for cost
10 recovery.³²

11 Staff agrees with CUB that the AAC efficiencies are derived from a known
12 structure and predictable schedule, which minimizes frequency of rate
13 changes.³³ Having an AAC should reduce the levels of the deferrals and
14 associated interest as the rate is updated for the forecast of the following year
15 versus using a "stale" base rate value.

16 **Q. AWEC argues that cost allocations are best restricted to general rate**
17 **cases. The Company disagrees.³⁴ What is Staff's direction on this?**

18 A. Staff agrees with the Company that the Purchase Gas Adjustment (PGA)
19 provides a precedent for the now proposed RNG AAC.³⁵

³¹ See NWN/1600, Kravitz/28.

³² NW Naturals argument for broad Company discretionary flexibility in timing starts at NW Natural/1600, Kravitz/32, line 16.

³³ See CUB/200, Gehrke/24.

³⁴ See AWEC/100, Mullins/40, 41 and NWN/1600 Kravitz/28.

³⁵ See NWN/1600, Kravitz/28. The Company cites ORS 757.259(2)(e) for applicable law.

EARNINGS TEST – WITH AND WITHOUT DEFERRALS

1 **Q. Why shouldn't the Company be able to defer costs associated with**
2 **RNG plant put in service prior to the rate effective date of November 1?**

3
4 A. Staff concludes there is minimal regulatory lag when utilizing a RNG AAC and
5 a deferral is not needed.³⁶ Further, the Company's argument for a deferral in
6 its RNG AAC conflicts with its arguments in support of an AAC. On the one
7 hand, NW Natural indicates that it needs a RNG AAC through Schedule 198
8 because general rate cases and deferrals are inadequate and too slow to
9 ensure appropriate cost recovery. But for this issue, the Company pivots and
10 indicates that the RNG AAC requires the support of deferrals.³⁷ Logically, both
11 conflicting arguments cannot be simultaneously true.

12 **Q. AWEC argues that were the Commission to authorize deferrals for**
13 **projects in service prior to being authorized in rate, then the deferrals**
14 **should be subject to an earnings test 100 basis points less than NW**
15 **Natural's authorized Return on Equity (ROE)?³⁸ Why does Staff**
16 **support this approach?**

17 A. These projects have lower risk of rate recovery and their true required rate of
18 return is much lower and near cost of incremental long-term debt.

19 **Q. Would the Company be harmed if its AAC did not include a deferral?**

³⁶ See AWEC/100, Mullins/41 and CUB/200 Gehrik/26.

³⁷ See NWN/1600, Kravitz/36-38.

³⁸ See AWEC/100, Mullins/42.

1 A. Not to the extent the Company can time its projects to come on-line near
2 November 1 of each year. Also the Company can file a general rate case if
3 NW Natural believes the harm it faces is too great.

4 **Q. Would it be inconsistent with ORS 757.394 and ORS 757.396 to**
5 **authorize an AAC with no deferral, or with a true-up mechanism**
6 **subject to an earnings test of 100 basis points (bps) less than NW**
7 **Natural's authorized ROE?**

8 A. I do not think so. Required ROE is predicated on risk of comparable
9 endeavors. Returns that "AUTOMATICALLY" flow through to the Company
10 have comparable risk to top rated corporate bonds and only slightly greater risk
11 than U.S. Treasuries.

12 **Q. Is Staff saying investors would receive adequate compensation in the**
13 **above scenario?**

14 A. Yes. Investors, and investment bank and market analysts like a sure thing.

15 **Q. What rate spread does Staff advise for additional RNG projects**
16 **including qualified projects subject to an AAC?**

17 A. Again, Staff recommends CUB's approach for the allocation of costs on an
18 equal cents per therm basis to all customers except storage, including special
19 contract customers.

ISSUE 4. RESIDENTIAL LINE EXTENSION POLICY

1
2 **Q. Please recap line extension discussions in this general rate case to**
3 **date.**

4 A. The Coalition and CUB propose changes to line extension policy.³⁹ They
5 consider the carbon reduction costs for a new customer over a 20-year period
6 and changes in green-house gas (GHG) emissions and climate policy since
7 residential line-extension policy was last revised. While the Company
8 acknowledges that utility customer costs will be directly impacted by
9 compliance with the CPP and HB 2021, NW Natural disagrees with both CUB's
10 and the Coalition's findings and proposes no change to its Schedule X.⁴⁰

11 **Q. Does Staff believe it is appropriate to implement the policy change**
12 **proposed by the Coalition and CUB in a rate case concerning only one**
13 **gas utility?**

14 A. No. Staff recommends the Commission find that the issues raised by the
15 Coalition and CUB are complex matters applicable to all natural gas utilities,
16 and more appropriately handled in a separate docket. Staff believes there is
17 considerable benefit to a common decision-making framework applicable to all
18 three natural gas utilities. Further, Staff does not think the record is sufficient
19 to implement CUB's framework for allocating carbon reduction costs for the
20 coming two decades to these new customers.

³⁹ See CUB 100, Jenks/12, 17 and Coalition/200, Burgess/30.

⁴⁰ See NW Natural/1800, Taylor/21.

1 **Q. Does Staff offer an opinion now on whether a new customer should**
2 **pay 100 percent of environmental compliance costs at time of**
3 **connection or otherwise pay for the financing of guarantees of these**
4 **costs?**

5 A. Not now. These are important questions that the Commission could consider
6 addressing in a docket with all three gas utilities operating in Oregon and
7 opportunity for interested persons and organizations to get involved.

STAFF RECOMMENDATIONS

1
2 **Q. What does Staff Recommend regarding the prudence of costs incurred,**
3 **cost recovery and cost allocation for the Lexington RNG project?**

4 A. Staff recommends the Commission determine the Lexington RNG project is
5 prudent and authorize recovery under SB 98 (2019). Staff further
6 recommends that costs be allocated on an equal cents per therm basis, as
7 proposed by CUB, to all customers except storage, including special
8 contract customers.

9 **Q. Does Staff recommend a RNG AAC utilizing an updated Schedule 198,**
10 **and if so with what parameters?**

11 A. Yes. Staff recommends the Commission start with CUB's AAC proposal but
12 inject some of Staff proposed provisions, some of which parallel the
13 Company's and CUB's apparent intent. Staff recommends an AAC with the
14 following elements.

- 15 1. O&M costs to be updated August 1 of each year;
- 16 2. RNG AAC rate changes to occur ONLY on November 1 of each year;
- 17 3. New projects to be addressed in rate filings by February 28 of each year;
- 18 4. RNG projects must be operational by October 1 for cost recovery; and
- 19 5. No authorization for deferrals for projects when they are brought on-line.
- 20 6. However, if the Commission decides to allow for deferrals, ROE on
- 21 deferrals should be the Commission authorized ROE minus 100 bps.
- 22 7. Staff recommends a deadband of +/- 50 basis points on deferred
- 23 amounts to incent the company to operate efficiently.
- 24 8. Cost allocation for new RNG projects whether or not an AAC is
- 25 authorized would also be as recommended by CUB above for the
- 26 Lexington RNG project.

27 **Q. What recommendation does Staff make regarding updating residential**
28 **line-extension policy?**

1 A. Staff recommends that this topic be addressed in a separate docket to ensure
2 all stakeholders are given adequate opportunity to participate and to allow the
3 Commission to formulate common practicable solutions across all three
4 Commission-jurisdictional natural gas utilities.

5 **Q. Does that conclude your testimony?**

6 A. Yes.

CASE: UG 435
WITNESS: MATT MULDOON

**PUBLIC UTILITY COMMISSION
OF
OREGON**

**STAFF EXHIBIT 1801
Hydrogen Mega Hub News**

**Exhibits in Support
Of Rebuttal Testimony**

June 30, 2022

Chevron Pulls Out of Utah Hydrogen Hub Backed by DOE

by Siri Hedreen – S&P Global Market Intelligence – Jun. 24, 2022



A rendering of the Advanced Clean Energy Storage project in Delta, Utah.

Chevron USA Inc. is **pulling out** of a renewable-powered hydrogen project in **Delta, Utah**, just **weeks after** the **U.S. Energy Department issued** a **\$504.4 million loan guarantee** for the project dubbed the "world's largest **green hydrogen hub**."

The **Chevron** Corp. subsidiary **said in September 2021** that it **would acquire** an **equity interest in the Advanced Clean Energy Storage project**, or **ACES**. A few days later, Chevron **unveiled** a broader strategy to spend **\$10 billion through 2028** in **ventures** to reduce greenhouse gas emissions, including renewable fuels, carbon capture and hydrogen projects.

But the company is **walking back** its **plan** to acquire a stake in ACES, Chevron confirmed to S&P Global Commodity Insights on June 23.

Chevron said in an emailed statement that "commercial agreements must meet certain thresholds" before its low-carbon business opportunities can proceed.

"Unfortunately, our opportunity to acquire an equity interest in ACES Delta LLC no longer meets our requirements," a spokesperson said. "We continue to explore hydrogen opportunities – including in the western United States where we have established an early and growing business – and remain committed to identifying and pursuing lower carbon solutions and providing affordable, reliable, ever-cleaner energy."

ACES, a **collaboration of Mitsubishi** Power Americas Inc., **Magnum** Development, LLC, **Haddington** Ventures LLC and **Black & Veatch** Holding Co., aims to **produce hydrogen using 220 MW** of **electrolyzer machines** and **store** it in **two underground salt caverns**.

The clean-burning gas will be used as a feedstock for industry, transportation and power generation, including the Intermountain power station. There, the **hydrogen** will be **converted into electricity serving** municipal **utilities** in **Utah and California, including** the **Los Angeles** Department of **Water and Power** California.

"We expect this opportunity to generate attractive returns and to provide cost-effective entry into a scalable hydrogen production platform with existing and future demand sources," Jeff Gustavson, president of the company's Chevron New Energies division, said during a September 2021 call.

In May, Chevron confirmed it had put another of its low-emissions projects on hold. The company withdrew its permit application at the U.S. Environmental Protection Agency for a carbon capture and storage facility in Mendota, Calif.

Chevron's emissions-reduction strategy differs from that of its European oil and gas peers in not including wind and solar power generation projects. The company is instead focusing on "managing molecules," Chevron CEO Michael Wirth said recently.

But investment in Big Oil may be risky as companies bet on unproven technologies like carbon capture, according to the Carbon Tracker Initiative, a London-based think tank.

CERTIFICATE OF SERVICE

UG 435 – Rebuttal Testimony

I certify that I have, this day, served the foregoing document upon all parties of record in this proceeding by delivering a copy in person or by mailing a copy properly addressed with first class postage prepaid, or by electronic mail pursuant to OAR 860-001-0180, to the following parties or attorneys of parties.

Dated this 30th day of June, 2022 at Salem, Oregon

Kay Barnes

Kay Barnes
Public Utility Commission
201 High Street SE Suite 100
Salem, Oregon 97301-3612
Telephone: (971) 375-5079

UG 435 – SERVICE LIST (4/22/2022)

	10101 S TERWILLIGER BLVD PORTLAND OR 97219 sahler@lclark.edu
AWEC	
TOMMY A BROOKS CABLE HUSTON LLP	1455 SW BROADWAY STE 1500 PORTLAND OR 97201 tbrooks@cablehuston.com
EDWARD FINKLEA ALLIANCE OF WESTERN ENERGY CONSUMERS	545 GRANDVIEW DR ASHLAND OR 97520 efinklea@awec.solutions
CHAD M STOKES (C) (HC) CABLE HUSTON LLP	1455 SW BROADWAY STE 1500 PORTLAND OR 97201 cstokes@cablehuston.com
CUB	
WILLIAM GEHRKE (C) (HC) OREGON CITIZENS' UTILITY BOARD	610 SW BROADWAY STE 400 PORTLAND OR 97206 will@oregoncub.org
MICHAEL GOETZ (C) (HC) OREGON CITIZENS' UTILITY BOARD	610 SW BROADWAY STE 400 PORTLAND OR 97205 mike@oregoncub.org
Share OREGON CITIZENS' UTILITY BOARD OREGON CITIZENS' UTILITY BOARD	610 SW BROADWAY, STE 400 PORTLAND OR 97205 dockets@oregoncub.org
EARTHJUSTICE	
KRISTEN L BOYLES (C) EARTHJUSTICE	810 THIRD AVE STE 610 SEATTLE WA 98104 kboyles@earthjustice.org
ADAM HINZ (C) EARTHJUSTICE	810 THRID AVENUE STE 610 SEATTLE WA 98104 ahinz@earthjustice.org
JAIMINI PAREKH (C) EARTHJUSTICE	810 THIRD AVENUE STE 610 SEATTLE WA 98104 jparekh@earthjustice.org
NW NATURAL	
ERIC NELSEN (C) (HC) NORTHWEST NATURAL	250 SW TAYLOR ST PORTLAND OR 97204 eric.nelsen@nwnatural.com
Share NW NATURAL (HC) NW NATURAL	250 SW TAYLOR ST PORTLAND OR 97204 efiling@nwnatural.com
JOCELYN C PEASE (C) (HC) MCDOWELL RACKNER GIBSON PC	419 SW 11TH AVE STE 400 PORTLAND OR 97205 jocelyn@mrg-law.com
SBUA	
JAMES BIRKELUND SMALL BUSINESS UTILITY ADVOCATES	548 MARKET ST STE 11200 SAN FRANCISCO CA 94104 james@utilityadvocates.org

DIANE HENKELS (C) SMALL BUSINESS UTILITY ADVOCATES	621 SW MORRISON ST. STE 1025 PORTLAND OR 97205 diane@utilityadvocates.org
DANNY KERMODE (C) No Business Name	5553dkcpa@gmx.us
STAFF	
STEPHANIE S ANDRUS (C) (HC) PUC STAFF--DEPARTMENT OF JUSTICE	BUSINESS ACTIVITIES SECTION 1162 COURT ST NE SALEM OR 97301-4096 stephanie.andrus@doj.state.or.us
MATTHEW MULDOON (C) (HC) PUBLIC UTILITY COMMISSION OF OREGON	PO BOX 1088 SALEM OR 97308-1088 matt.muldoon@puc.oregon.gov