

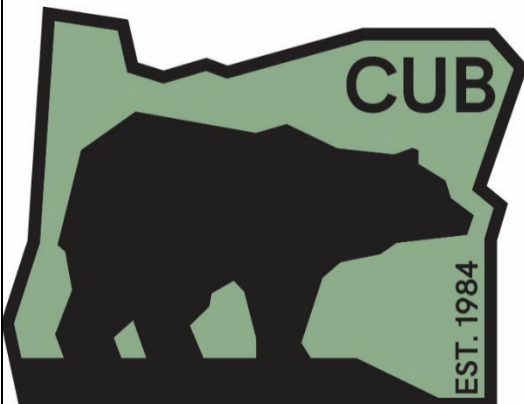
**BEFORE THE PUBLIC UTILITY COMMISSION
OF OREGON**

UG 490

In the Matter of)
)
NW NATURAL,)
)
NW NATURAL REQUEST FOR A)
GENERAL RATE REVISION)
_____)

REBUTTAL AND CROSS ANSWERING TESTIMONY
OF THE
OREGON CITIZENS' UTILITY BOARD

JULY 2, 2024



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I. INTRODUCTION

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

A. My name is Bob Jenks. I am the Executive Director of the Citizens' Utility Board (CUB). My business address is 610 SW Broadway, Ste. 400 Portland, Oregon 97205.

Q. Please describe your educational background and work experience.

A. My witness qualification statement is found in exhibit CUB/101.

Q. What is the purpose of your testimony?

A. I wish to respond to three items in Northwest Natural's (NWN) Reply Testimony.

- NWN's criticism of CUB's proposal for a mechanism to address rate shock.
- NWN plans to propose a multi-year ratemaking mechanism; and
- The regulatory inefficiency that will be created by several of NWN revenue requirement proposals which gut existing standard forecasting methods.

II. CUB'S RATE SHOCK PROPOSAL

Q. What was CUB's proposal to deal with rate shock?

A. CUB proposed that the Commission develop a standard mechanism for when and how to address rate shock. Under CUB's proposal:

- Residential rates would be capped at 10% or 7% + the Consumer Price Index
- When on an annual basis, a utility goes over the cap, the Commission will moderate the increase by setting ROE at the lowest level that is still within a reasonable range.
- If the rate increase is above this cap, the Commission should delay part of this GRC increase until Spring to keep rates under the cap.
- The Company should be required to report on actions designed to mitigate rate shock, should be required to implement a six month moratorium on disconnections, and should report additional information about arrearages.

There are several important pieces to this proposal:

1. ***This is delaying part of the increase, not deferring cost recovery.***

The purpose of a General Rate Case is to set a rate that will be reflective of utility's prudent costs. The rates established in a general rate case often will remain in place for several years. This is much different than the rates in a power cost filing or a PGA. In a GRC, a test year is used to allow us to forecast the utility's costs. But the purpose of the rates that are set are not to guarantee cost recovery for the test year, but to set a price that is generally reflective of the utility's costs and can be expected to produce a reasonable return. The test year itself and the first 12 months from the rate effective date do not have to be the same. For example, in its most current rate case,

1 Idaho Power used a calendar year 2024 test year¹ to establish rates that will go into
 2 effect on October 15, 2024.²

3 All CUB is proposing in this case is a delay in implementing part of the rate increase.
 4 But the goal is still the same to use a test year to identify a rate that will allow the
 5 company to recover its costs and earn a reasonable return on an ongoing basis until
 6 the next general rate case. The chart below shows the months of the test year and
 7 when the rate effective date is for Idaho Power’s current rate case, NWN’s proposal
 8 in this rate case, and CUB’s proposal in this rate case.

9 ***Figure 1: Comparing months of the test year and rate effective date***
 10 ***for: Idaho Power’s current rate case UE 426; NWN’s proposal in this***
 11 ***rate case UG 490; and CUB’s proposal in this rate case UG 490.***
 12

Idaho Power														
Test Year		1	2	3	4	5	6	7	8	9	10	11	12	
Rate Effective Date											X			
NWN														
Test Year		1	2	3	4	5	6	7	8	9	10	11	12	
Rate Effective Date		X												
CUB														
Test Year		1	2	3	4	5	6	7	8	9	10	11	12	
Rate Effective Date		X					X							

¹ See UE 426, *In the Matter of IDAHO POWER COMPANY, Request for a General Rate Revision*, Idaho Power/100 Grow/20 (Dec. 15, 2023).

² See UE 426, *In the Matter of IDAHO POWER COMPANY, Request for a General Rate Revision*, Memorandum adopting procedural schedule (Jan. 12, 2024).

1 Changing the rate effective date can be contrasted to a deferral. In a deferral, a set of
2 costs are put aside, tracked, and later added into rates with a carrying charge. In UG
3 459, the Commission used a deferral to limit a rate increase caused by the 2022 PGA
4 to 15%. In 2022, the natural gas commodity market experienced significant volatility
5 which drove up gas prices.³ Customers were looking at a 25% increase after
6 Northwest Natural filed its PGA. While that year had a GRC, it was already settled,
7 so there was not the option of delaying the GRC increase.⁴ Under UG 459, use of a
8 deferral allowed rates to be decreased by more than \$30 million between November
9 1, 2022, and March 14, 2023, through a temporary “bill credit.” They were then
10 increased by more than \$30 million between March 15 and October 31, 2023.⁵
11 Customers paid lower rates than they would have without the rate shock mitigation
12 from November 1, 2022, to March 15, 2023, but they paid higher rates from March
13 16th to October 31st.

14 Beyond leading to higher rates when the deferral is being surcharged, a deferral has a
15 couple interrelated problems. First, there is a carrying charge, increasing the amount
16 that customers pay overall. Deferrals typically used the utility’s cost of capital before
17 they are authorized for amortization and the blended treasury rate after they are
18 authorized for amortization. In the PGA example, the carry charge used was at the
19 Company’s cost of short-term debt. In essence, the Company is just giving customers

³ UG 459, *In the Matter of NORTHWEST NATURAL GAS COMPANY, dba NW NATURAL, Advice No. 22-17, Request for Inclusion of Temporary Bill Credits Associated with Residential Rate Mitigation for the 2022-2023 Winter Heating Season*, Order No. 22-425 at 2 (Oct. 31, 2022).

⁴ See UG 435, *In the Matter of NORTHWEST NATURAL GAS COMPANY, dba NW NATURAL, Request for a General Rate Revision*.

⁵ UG 459, *In the Matter of NORTHWEST NATURAL GAS COMPANY, dba NW NATURAL, Advice No. 22-17, Request for Inclusion of Temporary Bill Credits Associated with Residential Rate Mitigation for the 2022-2023 Winter Heating Season*, Order No. 22-425 (Oct. 31, 2022).

1 a loan rather than a reduction of costs. Customers are using the utility to finance a rate
2 decrease and paying the utility back with interest. In the interest of protecting
3 customers from rate shock, the regulatory system is making customer pay more in
4 total costs to the utility than they would have done without any rate shock mitigation.
5 The second interrelated problem is that financial mechanism provides no incentive for
6 the company to manage its costs. Knowing that if costs get out of hand and lead to rate
7 shock, the utility gets to finance a deferral to temporarily lower rates but is fully paid
8 back with interest, provides no incentive to the utility to manage its costs. On the
9 other hand, knowing that if costs get out of hand and lead to rate shock, that the
10 recovery of some dollar might be delayed a few months, provides the utility with an
11 incentive to try to manage the timing of its investments and avoid a regulatory delay
12 in cost recovery.

13 **Q. What was the Company's response to this proposal?**

14 **A.** Generally negative. Beyond its income-qualified bill discount program, NWN is not
15 supportive of proposals to address rate shock. Instead NWN offered a variety of
16 arguments against CUB's proposal:

- 17 • The Commission has never adopted a "one-sized fits all" mechanism to
18 address rate shock⁶
- 19 • Delaying rate increases prevents utilities from timely recovering their
20 costs that are necessary⁷
- 21 • CUB's proposal ignores the 10 month suspension period⁸
- 22 • CUB's proposal violates the regulatory compact⁹
- 23 • CUB focuses on rate increases, not rate decreases¹⁰

⁶ See NWN/2200 Kravitz/31.

⁷ See NWN/2200 Kravitz/35.

⁸ See *Id.*

⁹ See NWN/2200 Kravitz/32.

¹⁰ See NWN/2200 Kravitz/33.

- 1 • NWN rates would be subject to mitigation if they went up 11% and 11%
2 hardly constitutes rate shock¹¹
- 3 • Adjusted for inflation, the average residential bill is 7.7% less than 15
4 years ago¹².
- 5 • CUB's proposal would encourage annual filings so utilities would come in
6 with 7% increases each year rather than biannually filing for 14%¹³
- 7 • CUB has been happy with NWN for limiting rate changes in the past.¹⁴
- 8 • CUB's proposal to reduce ROE as part of its rate shock mitigation ignores
9 Oregon law which requires returns to be reasonable.¹⁵

10
11
12 **Q. How do you respond to the argument that the Commission has never adopted a**
13 **“one-sized fits all” mechanism to address rate shock?**

14 **A.** I agree. If the Commission had implemented an ongoing mechanism to address rate
15 shock, it is doubtful that CUB would be proposing such a mechanism. But it is
16 important to recognize that CUB's proposal is constructed with the tools that the
17 Commission itself identified as available to mitigate rate shock¹⁶. So while the
18 Commission hasn't constructed a mechanism with these tools, it has identified these
19 as the tools that are available to mitigate rate shock.

20 The Commission has adopted a set of mechanisms to facilitate NWN's cost recovery:
21 the Purchased Gas Adjustment (PGA), Schedule 198, the Renewable Natural Gas
22 Automatic Adjustment Clause, Schedule 178, Geographically Targeted Energy
23 Efficiency, Schedule 185, Weather Adjusted Rate Mechanism Program (WARM),
24 Schedule 190, Decoupling, and Schedule 193, to recover the costs of remediation of

¹¹ See *Id.*

¹² See NWN/2200 Kravitz/30.

¹³ See NWN/2200 Kravitz/34.

¹⁴ See NWN/2200/Kravitz/35

¹⁵ See NWN/2200/Kravitz/37

¹⁶ UE 426, *In the Matter of IDAHO POWER COMPANY, Request for a General Rate Revision*, Opening Testimony, CUB/103 Jenks.

1 the Portland Harbor Superfund site. Offsetting these cost recovery mechanisms with a
2 new mechanism that focuses on the size and affordability of rate increases provides
3 balance between the interests of customers and the interests of the utility.

4 While the Commissions has adopted income-qualified bill discounts as directed by
5 HB 2475, it has not adopted any mechanisms to address the effects of rate shock on
6 residential customers caused by large, sudden increases. These increases make it
7 difficult for customers who live paycheck-to-paycheck to manage their bills, some of
8 whom qualify for income based discounts and some who do not. This year there are
9 multiple utilities proposing rate hikes that are not just above the rate of inflation but
10 range between 15% and 27%. In the last three years, many customers have seen their
11 bills go up by more than 30 or 40%. The reason such a proposal should be adopted
12 today is that the problem of rate shock associated with large increases has never been
13 higher.

14 NWN is a good example. Since October 2021, the rate NWN charged to me for using
15 gas increased by 42.7%¹⁷. Residential customers living in single family homes will
16 see an additional increase of 18% under the proposed rates in this rate case. If this is
17 approved, many households, including my own, will have seen their rates increase by
18 more than 65% in 3 years. This is not sustainable and requires Commission action.

19 ///

20 ///

¹⁷ The current rate charged on my May bill is 1.28519. In October 2021, the rate charged on my bill was 0.90732. This is an increase of 42.7%.

1 **Q. How do you respond to NWN claims that CUB's proposal would delay recovery**
2 **of costs that are necessary?**

3 **A.** The current rate increases, which reflect the investment priorities of the Company, are
4 not sustainable. Someone needs to provide some discipline – some constraint to
5 utility spending. In an ideal world, the management of the Company would focus on
6 trying to keep the utility's costs under control, but when that is not the case,
7 regulators have to supply the constraint.

8 NWN argues that all of these costs are necessary, but CUB is doubtful. The general
9 approach to utility cost recovery is to examine each individual cost for prudence. And
10 prudence generally looks at whether the utility system will benefit from the
11 investment over the life of the investment with many utility investments having useful
12 lives of 50 years or more. The prudence determination is focused on cost-
13 effectiveness not on whether the cost is necessary. The problem with this ratemaking
14 approach of looking at each individual line item to see if it meets this cost-
15 effectiveness test, is that it ignores the overall rate level, and assumes that prices are
16 "fair," "just" and "reasonable" if they reflect cost effective decision making. If a
17 utility came forward and said that over the next two years it will make every
18 "prudent" investment that it could model as cost effective over a 50-year time period,
19 the result would likely be unaffordable for customers. Each individual investment is
20 not made in isolation. Even with multiple cost recovery mechanisms, customers must
21 be able to afford all the investments – all of the cost increases – that the Commission
22 approved. And the prudent management of a utility should recognize this.

1 But the Company is right. CUB's proposal could delay recovery of some investments.
2 If a utility cannot keep its costs increases below the threshold, then some of the
3 increase will be delayed. Recovery will not be denied, but it will be delayed. But only
4 the part of the increase above the threshold will be delayed. If a utility can
5 successfully manage the timing of its investments and cost increases in order to avoid
6 rate shock, then there will not be any delay. If a utility comes close, but occasionally
7 goes over the threshold by a small amount, only that small amount would be delayed.
8 CUB's proposal will only cause significant problems for a utility that is unwilling or
9 unable to keep its costs under control and maintain affordable rates.

10 **Q. How do you respond to NWN's argument this this ignores the 10-month**
11 **suspension period?**

12 **A.** NWN's belief in the sanctity of the suspension period cannot be taken seriously.
13 Utilities in Oregon regularly request trackers to bring in costs that become used and
14 useful well after the rate effective date. NWN's testimony discusses how in its next
15 general rate case it is going to propose a multiyear rate case that authorizes a series
16 of rate increases over multiple years. The Company seems to be taking the position
17 that utilities can request rate increases occur outside of the suspension period, but
18 customers cannot.

19 In addition, CUB is not asking the Commission to ignore the suspension period. The
20 Commission must issue a final order by the end of the suspension period. Under
21 CUB's proposal that final order would determine the rates that go into effect on
22 November 1, which combine the GRC, PGA and other schedules that run
23 concurrently with the PGA. In that final order, the Commission would also

1 determine if the rate shock threshold had been breached, and if it had, a
2 determination of how to mitigate it.

3 **Q. How do you respond to NWN’s argument that CUB’s proposal violates the**
4 **regulatory compact?**

5 **A.** Utilities raise the specter of violation of the regulatory compact when they think they
6 might not get cost recovery for something. But CUB’s proposal does not deny cost
7 recovery, it may shift the timing of some cost recovery and could lead to some
8 regulatory lag, but it is designed to allow for the utility to recover its costs.

9

10 In addition, the regulatory compact does not represent a fundamental principle of
11 utility ratemaking:

12 Framing utility regulation as a “compact” is a rhetorical device that has
13 been invoked by industry to argue against competition and in favor of rate
14 increases and cost recovery for investments that did not benefit ratepayers.
15 While several PUCs have used the term “regulatory compact” as a
16 shorthand description of regulation, no court or PUC has concluded that a
17 utility is legally entitled to relief, such as cost recovery, under a
18 “regulatory compact.” On the contrary, PUCs and courts have explicitly
19 rejected such arguments¹⁸.

20 The idea of a “regulatory compact” grew out of utility proposals to recover stranded
21 costs associated with abandoned nuclear power plants:

22 The first PUC order or court decision to include the phrase “regulatory
23 compact” was published in 1982 by the Massachusetts Department of
24 Public Utilities (DPU). That DPU order recounts the history of a cancelled
25 nuclear plant and decides whether the IOU may recover the costs of the
26 failed project from ratepayers. When regulators across the country debated
27 such requests in the 1980s, and a decade later when they considered
28 restructuring the industry, IOUs and some PUCs used the “compact”
29 framing in debates about stranded-cost recovery and protections from

¹⁸ See Ari Peskoe, Utility Regulation Should Not Be Characterized as a “Regulatory Compact”, HARV. ENVTL. POL’Y INITIATIVE, 1 (2016), <http://eelp.law.harvard.edu/wp-content/uploads/Harvard-Environmental-Policy-Initiative-QER-Comment-There-Is-No-Regulatory-Compact.pdf>.

1 competition. This metaphorical compact is rooted neither in history nor in
2 law¹⁹.

3 However, as opposition to recovery of costs associated with canceled nuclear power
4 plants grew and many states adopted laws that codified the “used and useful”
5 standard, the idea that a regulatory company required stranded cost recovery receded:

6 Many PUCs reached similar conclusions in the 1990s about whether any
7 “regulatory compact” dictates stranded cost recovery. Washington
8 regulators determined that “[t]here is no agreement or compact, stated or
9 unstated, that commits the Commission to ensure that [the utility’s] capital
10 will be recovered fully regardless of any changes in the economic,
11 technological, or regulatory environment.” The Pennsylvania PUC
12 concluded that it “is not required to grant a utility recovery of 100% of its
13 claimed stranded costs upon either constitutional principles or a
14 ‘regulatory compact’ theory.” In Vermont, regulators found “no basis in
15 law to support the existence of a regulatory compact that constitutes a
16 binding and enforceable contract with the State.” And the Texas PUC
17 rejected a utility’s arguments, stating that “[t]here is no written contract by
18 which the State of Texas promised to pay a utility a reasonable return on
19 and of its generation investment.²⁰”

20 There is no regulatory compact that CUB is aware of that guarantees that the utility
21 has the power to decide the date that rates will change.

22 **Q. How do you respond to the criticism that CUB is focusing on rate increases, not**
23 **rate decreases?**²¹

24 A. Big large rate increases create significant problems for customers who live paycheck-
25 to-paycheck. Rate decreases do not create a similar problem. NWN criticizes CUB for
26 not taking into account that NWN customers saw a rate decrease in 2023²². But when
27 CUB talks about rate hikes, CUB includes this decrease. Earlier I testified that the
28 rate charged to me had increased by 42.7% since October of 2021. This includes all

¹⁹ Ibid. at 5.

²⁰ Ibid at 8.

²¹ See NWN/2200 Kravitz/33.

²² See *Id.*

1 cost increases during that time and the cost decrease that NWN says CUB is ignoring.
2 If the current proposal is accepted, NWN rates will have increased by 65% in a short
3 amount of time – and this number includes the 2023 rate decrease. The simple fact is
4 that NWN rates are increasing at an unsustainable level.

5 **Q. How do you respond to NWN’s argument that if rate went up 11%, after**
6 **decreasing in 2023, this would hardly be rate shock?**

7 **A.** Again, CUB believes that NWN rates are increasing at an unsustainable level. NWN
8 is not asking for an 11% increase, they are asking for an 18% increase. CUB is trying
9 to establish a threshold upon which the Commission will consider rate shock
10 mitigation. CUB is proposing that threshold be 10% but as we said in Opening
11 Testimony, the Commission could set it at another level – NWN could recommend a
12 different level for that threshold. CUB recognizes that if our proposal allows a 10%
13 rate hike to be implemented without rate shock mitigation, then a utility can argue
14 that there is not much of a difference between 11% and 10%, so we should not have
15 rate shock mitigation at 11%. And if the threshold is set at 11%, then someone can
16 argue that 12 % isn’t much different.

17 But this is true at any level. There will always be a number on one side of the
18 threshold and one on the other side of the threshold and one would trigger mitigation
19 and the other would not.

20 But what NWN is missing with this argument is that if there was an 11% rate hike,
21 and the rate mitigation was 10%, that the company would get a 10% increase on
22 November 1 and a delay of an additional 1% increase on April 1. This delay is small
23 and would not have a huge effect on the utility.

1 Finally, I note that there are a variety of similar thresholds that have been adopted.
2 NWN's PGA costs are subject to an annual true-up with a 90-10 sharing mechanism.
3 Well, if requiring the company to limit its recovery to 90% is reasonable, then there is
4 little argument that limiting its recovery to 89% of the variation between forecast and
5 actual cost would not also be reasonable.

6 **Q. How do you respond to NWN's argument that adjusted for inflation the average**
7 **residential bill is 7.7% less than 15 years ago²³?**

8 **A.** Before unconventional drilling allowed for a significant increase in gas extraction, gas
9 costs were higher and were more volatile. This was hard on customers. CUB has
10 never said that adjusted for inflation rates today are higher than they have ever been.
11 Nor have we suggested that returning to the time period before the Great Recession
12 and the expansion in the use of unconventional drilling would be a positive
13 experience. Knowing that there once was a period where gas costs were higher does
14 not mean that a 65% increase over three years is affordable or sustainable.

15
16 Rate shock is concerned about sudden increases in gas costs that affect customers
17 who are living paycheck-to-paycheck. These customers are trying to manage a set of
18 bills. When one suddenly goes up by 10, 20 or 65% it affects the ability to pay other
19 bills. The problem is the natural gas bill increase in relationship to other bills that the
20 customer has for housing, utilities, food, medicine, childcare, clothing and other
21 necessities. The focus is not on the relationship between this gas bill and one a
22 generation ago.

²³ See NWN/2200 Kravitz/30.

1 **Q. How do you respond to NWN argument that your proposal would encourage**
2 **annual filings so utilities would come in with 7% increases each year rather than**
3 **biannual filing for 14%?**²⁴

4 **A.** If a utility's costs were going up 7% per year, it would probably be easier for
5 customers to manage if it came in for annual rate hikes of 7% rather than coming in
6 every other year for a hike of 14%. It might be more difficult for stakeholders who
7 participate at the PUC, but for customers, it is probably a better circumstance.

8 One benefit of CUB's mechanism is that it would get utilities to start asking question
9 like this. Utility regulation should center the customer. There should be discussions
10 and consideration about the trade off between the frequency of rate hikes versus the
11 size of the rate hikes and those discussions should be focused on the customer
12 experience.

13 **Q. How do you respond to NWN's argument that CUB has been happy with NWN**
14 **for limiting rate changes in the past.**

15 **A.** Quotes or positions can be taken out of context and create the illusion that CUB's
16 position has changed. In the case NWN is referencing, CUB was proposing to only
17 allow RNG investments to go into rates on November 1 with other rate adjustments.
18 Currently RNG investments are small and do not, by themselves, create rate shock.
19 Absent rate shock caused by other mechanisms, limiting the number of rate changes
20 has appeal. However, when an increase on November 1 rises to the level of rate
21 shock, then having multiple rate increases per year by having some of the increase
22 delayed until April, is necessary.

²⁴ See NWN/2200 Kravitz/34.

1 **Q. How do you respond to NWN's claim that CUB's proposal to reduce the ROE as**
2 **part of its rate shock mitigation ignores Oregon law which requires returns to be**
3 **reasonable.**

4 **A.** NWN is wrong. CUB did not ignore Oregon law, nor did it propose that the
5 Commission violate Oregon law. The law that NWN is referring to is the statutory
6 language that codifies the *Hope* Standard into Oregon law. I was Executive Director
7 of CUB when that law was passed, and do not believe that my proposal is in conflict
8 with it in any manner.

9 I am not an attorney and CUB will save legal argument for briefing but let me clarify
10 that CUB did not ask the Commission to set the ROE at a level that is not reasonable.

11 Reasonableness is not a single point, but there are a range of reasonable outcomes.

12 When ROE witnesses recommend ROEs, they normally start with identifying a
13 reasonable range of allowable ROEs and then explain why they are recommending a
14 specific point within that range.

15 CUB is recommending that as part of its rate shock mitigation plan the Commission
16 consider lowering the ROE but ***keeping it within the reasonable range of allowable***
17 ***ROEs***. If the Commission sets a reasonable range of ROEs as between 9.1% and
18 10.0% and sets the ROE at 9.4%, then the Commission still has room to reduce the
19 ROE and still maintain a reasonable return for NWN's shareholders.

20 CUB believes that this is a very effective way to incent utilities to prevent rate shock
21 in the first place. Currently, utilities have a great deal of incentives to spend money,
22 to make investments, to ask for new ratemaking mechanisms, and to seek higher
23 rates. But incentives to hold down rates are particularly non-existent. Even a small 10

1 basis point reduction in ROE will get a utility's attention and could lead to more
2 focus on controlling costs.

3

4 III. MULTI-YEAR RATE PLANS

5 **Q. The Company talked about multi-year rate plans and cited CUB's support for**
6 **such plans. Are CUB and the Company aligned on multi-year rate plans?**

7 **A.** No. CUB and NWN are not aligned. While both see a purpose of multi-year rate
8 plans, our approaches seem to have different goals, our proposed designs are much
9 different, and our approaches to getting to multi-year plans are much different.

10 **Q. How are your goals different?**

11 **A.** After reviewing NWN's testimony, I believe that its approach is seeking to facilitate
12 raising rates. CUB, on the other hand, is trying to bring some efficiency to the
13 regulatory process and avoid relitigating the same issues over and over and over and
14 over and over and over.

15 NWN is going to propose setting the rates for two to four years in advance²⁵. This
16 will reduce regulatory lag to the utility²⁶. Under NWN's proposal, O&M costs would
17 increase every year at the rate of the Consumer Price Index (CPI), routine capital
18 investments for things like public works, vehicles, transmission and distribution
19 integrity management would be forecast to increase every year²⁷. Larger capital
20 investments would have to be justified. Rate cases would be filed on July 1 each

²⁵ See NWN/2200 Kravitz/40,

²⁶ NWN/2200 Kravitz/41.

²⁷ NWN/2200 Kravitz/42-44.

1 year²⁸. Rates would go into effect on November 1. According to the company, this
2 will allow parties several months to review and conduct discovery prior to November
3 1²⁹.

4 Essentially, NWN's proposal is a full rate case each year, but with a large set of costs
5 allowed to increase at the CPI. Routine capital investments would be increased based
6 on some sort of forecast and large capital projects would have a limited review time.

7 While NWN says that stakeholders "would have several months to review and
8 conduct discovery" this is highly misleading. Prudence reviews are inherently fact
9 specific and require a contested case. If NWN wants a rate effective date in

10 November, then the Commission will want time to consider the record in its decision
11 making (four weeks) – remember this is the same time period that the Commission is
12 making decisions in two other contested cases, PGE's AUT and PacifiCorp's TAM as
13 well as considering the PGAs and all of the schedules that are updated with the PGA.

14 Before that we will need to have Opening and Closing Briefs and an evidentiary
15 hearing. If the Commission needs October to consider the record and make its
16 decision, then briefing and hearing will take up all or most of the month of

17 September. As the filing party the Company will want the final piece of testimony but
18 first must have time to conduct discovery on parties. So if the Company's final
19 testimony is around the first of September, then, and if there is expedited discovery,
20 Staff and Stakeholders would need to submit testimony in the first week in August.

21 NWN's proposal would allow about five weeks of time – from the day of filing – to

²⁸ NWN/2200 Kravitz/45

²⁹ Ibid.

1 review the prudence of major capital investments. Here is CUB's attempt to draft a
2 schedule to make this work:

<u>Activity</u>	<u>Date</u>
NWN Files	July 1
Staff and Intervenor Testimony	August 7
Company Reply Testimony	September 7
Prehearing brief	September 11
Hearing	September 16
Opening Briefs	September 23
Closing Briefs	September 30
Commission Decision	October 28
Rate Effective Date	November 1

3

4 There are two primary things that are different between what NWN is contemplating
5 and a general rate case: 1) O&M increases by the CPI and 2) There is a vastly shorter
6 period of time for parties to review capital investments for prudence.

7

8 CUB doesn't have a proposal for a multi-year rate case process but believes that the
9 goal should be to increase efficiency of regulation and to create good incentives for
10 the utility. In the 1990s, CUB supported, and the Commission implemented multi-
11 year rate cases under the Commission's Alternative Form of Regulation authority.

12 These multi-year rate cases essentially set a period of time (three to five years) where
13 the utility was allowed to raise rates each year by the inflation rate *minus* a
14 productivity factor. For the utility, this mechanism contained no earnings test, so if
15 the utility could control its costs, it would see an increase in earnings. For customers,
16 the formula guaranteed that utility rates would increase less than the rate of inflation.

17 CUB believes that if the Commission were to implement multi-year rate cases, the
18 process should also incent a utility to become more efficient with its costs with a goal

1 of seeing increases below the rate of inflation. Utility regulation should recognize that
2 not all costs have to increase every year. O&M costs are generally set in a general
3 rate case and then left untouched for several years until the next rate case which
4 creates an incentive for utilities to control costs. If the goal is to avoid annual rate
5 cases, then the focus should be on how to add in addition capital investments which
6 are the drivers of annual rate cases. While increases in O&M could cause the
7 occasional rate case, they do not drive the annual rate cases that we are trying to
8 avoid.

9

10 **Q. NWN and CUB also disagree on the process to develop a multi-year rate process.**

11 **Can you discuss this?**

12 **A.** Yes. NWN states that it intends to propose one in its next rate case. CUB is calling
13 for the Commission to open an investigation to explore the idea. These are very
14 different processes.
15 By proposing their mechanism in a GRC, NWN's proposal will require that the
16 Commission rule after a 10-month suspension period. And stakeholders will have to
17 discuss the multi-year process while also addressing all of the contested issues
18 associated with a GRC. Because NWN's proposal—even if it changes a bit—will
19 likely be self-serving and designed to facilitate raising rates, Staff, CUB, and other
20 parties will spend much of our effort pointing out all of the flaws in it. If there is time,
21 we can each propose alternatives, but the focus inevitably be on stopping the utilities
22 plan, rather than designing an appropriate mechanism.

1 If the Commission initiates an investigation, the process is different. First, there is not
2 a suspension period, so the development of a process designed for the future will not
3 be cut short by an artificial timeline. Second, because it does not begin with a self-
4 serving utility proposal, parties can approach the proceeding with an open mind.
5 Third, it would allow Staff (or maybe a consultant such as RAP) to examine the
6 designs and allow Oregon to begin its discussion by identifying the best practices
7 from around the country.

8 **IV. REGULATORY EFFICIENCY**

9

10 **Q. What are your concerns about Regulatory Efficiency?**

11 A. The reason that CUB could support a multi-year rate case process is to bring some
12 efficiency to the rate setting process. But CUB is concerned that NWN is using this
13 case to try to undermine one of the best tools the Commission uses for injecting
14 efficiency into rate cases: having standard methodologies.

15 For many years the PUC has had a set of standard methodologies that it used to
16 forecast various costs. These methodologies are important because they can reduce
17 the number of contested issues and, for an intervenor like CUB, we know that there
18 are certain issues that we do not have to spend a lot of time researching and making
19 proposals on because the PUC staff will propose the standard methodology and CUB
20 understands and supports this methodology. There are several examples of standard
21 methodologies that NWN is proposing to eliminate. And, if they are eliminated here,
22 then they are eliminated for all six investor-owned utilities. The workload associated
23 with every general rate case will increase as we will have to litigate more issues. This

1 is not an efficient use of time. CUB strongly opposes NWN's attempt to eliminate the
2 standard methodology for the following issues:

- 3 • Wages and Salaries
- 4 • Allowed Rate Base Additions
- 5 • Pay At Risk
- 6 • Meals and Entertainment
- 7 • Uncollectables
- 8 • Directors & Officers Insurance

9 **Q. What is the established methodology for Wages and Salaries and why does CUB**
10 **support this methodology?**

11 **A.** The wage and salary model used by the PUC Staff has been in place for many years.

12 It is designed to set a reasonable forecast of wages and salaries without giving the
13 company an incentive to raise salaries just before a rate case. It does this by selecting
14 a base year that is prior to the time the company began developing the current rate
15 case under the theory that it is not good regulatory policy to have utilities raising
16 salaries for the purpose of getting the higher salaries in upcoming rates. Instead,
17 salaries should be based on market conditions. The model then escalates the salaries
18 for inflation into the test year. To the degree that this formula is too restrictive and
19 does not reflect expected pay, Staff allows for the sharing of Wages and Salaries
20 above the model results.

21 CUB supports this model because it has proven to work over many years. It is fair.

22 And it was carefully designed to avoid having the timing of rate increases influence
23 the level of pay.

1 **Q. What is the established methodology for Allowed Rate Base Additions and why**
2 **does CUB support this methodology?**

3 **A.** The established practice at this Commission is to generally limit new rate base
4 additions to those that are used and useful on the rate effective date. There may be a
5 handful of exceptions for small items that are related to growth and are handled
6 through group depreciation, but significant new rate base items must be used and
7 useful on the rate effective date.

8 CUB supports this policy because it is consistent with our view of Oregon law, as
9 litigated in the Trojan lawsuits. I am not a lawyer, but the policy grows out of
10 Oregon's law that limits rate recovery to investments that are "presently used" to
11 serve customers. If something is not "presently used" on the rate effective date, then it
12 is ineligible for inclusion of rates.³⁰

13 NWN proposes to throw this policy out and includes in rates, rate base that does not
14 come online until sometime during the test year. NWN claims that this is legitimate
15 because they are only including a forecast of the time that the investment is expected
16 to be in service. Under this theory, if a new investment is expected to come online on
17 September 1st, it could be forecast into the test year based on two months of its
18 revenue requirement. CUB sees three big flaws with this proposal. First, when rates
19 go into effect and customers begin paying for it, the investments are not "presently"
20 used. Secondly, if the investment is delayed then it raises the possibility that
21 customers will be overcharged for the investment in that first year – or worse,
22 charged for something that did not provide any service during the year. Third, the

³⁰ Retired property is treated a little bit different.

1 Trojan case created a new exception to retroactive ratemaking: when a utility charges
2 rates with an item that is unlawfully included, the Commission must go back and
3 refund those charges. Adding refunds and retroactive ratemaking is not going to
4 promote efficient regulation.

5 **Q. What is the established methodology for Pay at Risk and why does CUB support**
6 **this methodology?**

7 A. The Commission's tradition is that non-officer pay at risk (incentives or bonuses)
8 should be discounted by 50% because bonuses are paid based on corporate
9 performance, such as earnings, and this reflects the interests of shareholders. CUB
10 believes that this is good policy. When the company puts in place a compensation
11 system that rewards employees for shareholder benefit, that should be excluded from
12 customers rates. Because pay at risk inherently involves a mix of measures that could
13 be categorized as things that benefit customers, things that benefit shareholders and
14 things that benefit both, having a standard policy of sharing the cost of pay at risk is a
15 good approach.

16 **Q. What is the established methodology for Meals and Entertainment and why does**
17 **CUB support this methodology?**

18 A. Historically, the Commission has disallowed 50% of the cost of meals and
19 entertainment. This is consistent with historic Internal Revenue Service practices for
20 business expenses. CUB supports this policy. If customers paid 100% of meals and
21 entertainment, the company would have an incentive to provide free food for its staff
22 at every meeting. To prevent overuse of the provision of meals, there would need to
23 be a requirement to review every meeting and every trip where meals were included

1 to see if it was a necessary expense and to see if it was a reasonable expense.
2 Handling regulation of meals and entertainment expenses by reviewing the prudence
3 of every expense that was booked to meals and entertainment will complicate
4 ratemaking and make rate cases less efficient. Using the IRS policy simplifies
5 regulation.

6 **Q. What is the established methodology for Uncollectables and why does CUB**
7 **support this methodology?**

8 **A.** The standard methodology is to use a 3-year rolling average of actual uncollectables.
9 The Company proposes to abandon this practice and adopt a new methodology. In
10 Opening Testimony CUB discussed the flaws with the Company's new methodology
11 for forecasting uncollectables expense³¹. CUB supports retaining the current
12 methodology. While some years, this methodology might over-forecast uncollectables
13 and some years it might under-forecast uncollectables, if applied consistently over
14 time, it will balance out.

15 **Q. What is the established methodology for Directors and Officers Insurance and**
16 **why does CUB support this methodology?**

17 **A.** The historic practice is to disallow 50% of excess coverage for D&O insurance. D&O
18 insurance typically consists of a primary layer and an excess layer that companies
19 purchase to give their officers and directors the greatest protection that is available.
20 While D&O insurance is a common business expense, much of the insurance
21 protection is to cover suits brought by shareholders. For example, PGE shareholders

³¹ See CUB/200 Garrett/6-7.

1 sued PGE after it lost \$127 million in the wholesale electric market in 2020³². PGE
2 settled that case. However, if the cost of the settlement was charged to customers, or
3 if the full cost of insurance was charged to customers, then customers would
4 indirectly be paying for the utility's imprudence. The alternative to sharing the
5 insurance costs would be to examine the history of claims for each utility to
6 determine what percentage is related to imprudent behavior.

7 **Q. What is CUB's recommendation regarding these regulatory tools.**

8 **A.** CUB urges the Commission to adopt Staff's application of the traditional
9 methodology for the following sets of costs.

- 10 • Wages and Salaries
- 11 • Allowed Rate Base Additions
- 12 • Pay At Risk
- 13 • Meals and Entertainment
- 14 • Uncollectables
- 15 • Directors & Officers Insurance

16

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

18 **A.** Yes. It does.

³² See Mike Rogoway, *Portland General Electric Settles Shareholder Class-Action Suit for \$6.5 Million*, Oregon Live, Mar. 2, 2022, <https://www.oregonlive.com/business/2022/03/portland-general-electric-settles-shareholder-class-action-suit-for-65-million.html>.

WITNESS QUALIFICATION STATEMENT

NAME: Bob Jenks

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ADDRESS: 610 SW Broadway, Suite 400
Portland, OR 97205

EDUCATION: Bachelor of Science, Economics
Willamette University, Salem, OR

EXPERIENCE: Provided testimony or comments in a variety of OPUC dockets, including UE 88, UE 92, UM 903, UM 918, UE 102, UP 168, UT 125, UT 141, UE 115, UE 116, UE 137, UE 139, UE 161, UE 165, UE 167, UE 170, UE 172, UE 173, UE 207, UE 208, UE 210, UE 233, UE 246, UE 283, UG 152, UM 995, UM 1050, UM 1071, UM 1147, UM 1121, UM 1206, UM 1209, UM 1355, UM 1635, UM 1633, and UM 1654. Participated in the development of a variety of Least Cost Plans and PUC Settlement Conferences. Provided testimony to Oregon Legislative Committees on consumer issues relating to energy and telecommunications. Lobbied the Oregon Congressional delegation on behalf of CUB and the National Association of State Utility Consumer Advocates.

Between 1982 and 1991, worked for the Oregon State Public Interest Research Group, the Massachusetts Public Interest Research Group, and the Fund for Public Interest Research on a variety of public policy issues.

MEMBERSHIP: National Association of State Utility Consumer Advocates
Board of Directors, OSPIRG Citizen Lobby
Telecommunications Policy Committee, Consumer Federation of America
Electricity Policy Committee, Consumer Federation of America
Board of Directors (Public Interest Representative), NEEA

**BEFORE THE PUBLIC UTILITY COMMISSION
OF OREGON**

UG 490

In the Matter of)	
)	
NW Natural)	REBUTTAL AND CROSS
)	ANSWERING TESTIMONY OF THE
NW NATURAL REQUEST FOR A)	OREGON
GENERAL RATE REVISION)	CITIZENS' UTILITY BOARD
_____)	

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6
7

8 **I. Introduction and Summary**

9 **Q. Are you the same John Garrett who filed Opening Testimony on behalf of the**
10 **Oregon Citizen’s Utility Board (CUB)?**

11 A. Yes, I presented CUB/200, Garrett.

12

13 **Q. What is the purpose of your Rebuttal Testimony in this proceeding?**

14 A. The purpose of my Rebuttal Testimony is to respond to NW Natural’s Reply

15 Testimony regarding the following matters:

- 1 • Residential Line Extension Allowance (LEA) Overspend Since 2018
- 2 • NW Natural’s Proposed LEA Policy
- 3 • NW Natural’s Proposed New Premises Customer Class

4

5 **Q. Briefly summarize your testimony on LEA overspend since 2018.**

6 A. Northwest Natural Gas Company’s (dba NW Natural or NWN) LEA polices since
7 2018 set caps on the “construction allowance” (i.e., LEA caps) that the Company
8 provides new customers to connect to its gas system.¹ In Opening Testimony,
9 Coalition Witness Cebulko showed that since at least 2018, the Company regularly
10 exceeded its LEA caps for residential customers resulting in \$16.2 million in
11 “overage.”² Here I provide further analysis of the \$16.2 million LEA overspend, a
12 response to the Company’s Reply Testimony on LEA overspend, and a
13 recommendation for a rate base reduction to address the overspend. My
14 recommendation is based on my estimation of how much LEA overspend remains
15 in rate base undepreciated. I estimate that about \$13.7 million of LEA overspend
16 since 2018 remains undepreciated in rate base and propose that it is removed.³

17

18 **Q. Briefly summarize your testimony on NW Natural’s proposed LEA policy.**

19 A. In Opening Testimony, I argued that the Company’s proposed LEA policy presents
20 an unreasonable risk of generating stranded assets that would unfairly burden
21 NW Natural’s customers, resulting in rates that are not just and reasonable. I also

¹ Exhibit CUB/402, Garrett – “NWN Schedule X”.

² UG 490 – Coalition/100 Cebulko/Pages 37 - 43.

³ Exhibit CUB/403, Garrett – “LEA Overspend”.

1 challenged several other assumptions in the Company's LEA modeling. I then
2 proposed a gradual phase-down of the Company's LEA.

3
4 Here I argue that the Company failed to satisfactorily address my arguments in its
5 Reply Testimony or propose a reasonable LEA policy in response to CUB's, Staff's
6 and the Coalition's Opening Testimonies. In response to claims by the Company in
7 Reply Testimony, I provide further analysis of the incentives within the LEA policy
8 and their likely outcomes. I provide updated modeling on the stranded investment
9 risks of the Company's LEA proposal from Reply Testimony. Ultimately, I find
10 that the Company's proposal fails to meet the fundamental requirement of an LEA
11 policy, fairly balancing the interests of new and existing customers, and fails to
12 adequately incorporate the Commission's direction for LEA proposals provided in
13 Order 22-388.⁴ I recommend a gradual phase-down of the Company's LEA to \$0.
14 My proposal builds upon the phase-down established in Order 22-388 and aligns
15 with Avista Gas Company's (Avista) LEA policy, which is being phased down to
16 \$0 over the next few years as well.⁵ I recommend a reduction in rate base
17 concomitant with an LEA in the Test Year that is three times the average margin
18 revenue of a residential customer. I also recommend that the Commission direct the
19 Company to adhere to the LEA cap for *each* new customer and *every* LEA.

⁴ See UG 435, *In the Matter of NORTHWEST NATURAL GAS COMPANY, dba NW NATURAL, Request for a General Rate Revision*. Order No. 22-388 at 49-52, (Oct. 24, 2022) <https://apps.puc.state.or.us/orders/2022ords/22-388.pdf>.

⁵ UG 461, *In the Matter of AVISTA CORPORATION, dba AVISTA UTILITIES, Request for a General Rate Revision*. Order No. 23-384, (Oct. 26, 2023) <https://apps.puc.state.or.us/orders/2023ords/23-384.pdf>.

1 **Q. Briefly summarize your testimony on NW Natural’s proposal to bifurcate the**
2 **residential customer class and create a “New Premises” residential customer**
3 **class.**

4 A. In Opening Testimony, I argued the Company’s proposal to bifurcate the
5 residential class results in New Premises residential customers paying significantly
6 higher rates than existing customers for identical usage of the gas system, and that
7 this is probably discriminatory. In Reply Testimony, the Company disputes the rate
8 disparity I identified and reasserts its proposal is justified by an analysis involving
9 its decoupling mechanism and assumptions about who New Premises customers
10 are likely to be. Here, I reaffirm that the resultant rates for New Premises
11 customers are disparate and argue the class bifurcation is arbitrary, unjustified, and
12 conflicts with the Commission’s efforts to address energy burden. I also note that
13 the New Premises class appears to be designed to support the Company’s proposed
14 LEA policy, which I argue is unreasonably risky and results in rates that are not
15 just and reasonable.

16

17 **II. Addressing LEA Overspend Since 2018**

18 **Q. What is an LEA?**

19 A. An LEA is part of the utility’s tariff on file with the Commission. An LEA is an
20 allowance that a utility provides to a new customer to fully or partially cover the
21 costs of connecting to the utility’s system. For instance, for a new gas utility
22 customer, the gas utility provides an LEA that will cover an established portion of
23 the costs to install a service pipeline, meter, and other connection costs. The new

1 customer covers the rest of the costs through a “Construction Contribution”. This
2 enables the new utility customer to receive gas service at a discount on the total
3 cost.

4

5 **Q. What is an LEA policy?**

6 A. Fundamentally, an LEA policy balances the interests of new and existing customers
7 by establishing the maximum LEA the utility will provide a new customer (i.e. the
8 LEA cap). When establishing an LEA cap that is fair to new and existing customers
9 alike, there are benefits, costs, and risks to account for.

10

11 The new customer benefits from the allowance itself, which either partially or
12 completely covers the cost of their new connection to the gas distribution system.
13 Conversely, an existing customer benefits from the new billing revenues the new
14 customer contributes over time, which offset a portion of the distribution system
15 costs that all customers must cover.

16

17 Regarding costs, it is important to note that while the utility covers the initial cost of
18 the LEA, the utility recovers the LEA’s initial cost and its financing expenses over
19 the course of the useful life of the LEA assets from all customers. Since
20 NW Natural’s service line has an average useful life of 65 years, with the addition
21 of financing costs, taxes, other expenses, the LEA’s total cost over time
22 significantly exceeds the LEA’s initial cost and is collected from customers over
23 many decades. You can think of it like a car loan or house mortgage: when the

1 LEA is financed over a long period, its total cost is much higher than its sticker
2 price. My LEA stranded investment modeling depicts this: a \$2,900 LEA ultimately
3 costs about ~\$15,400 when all is said and done.⁶

4
5 Existing customers incur risk as well. If a new customer does not contribute
6 sufficient revenues through billing, perhaps by using less gas than anticipated, then
7 the new customer will not offset the LEA's costs within a reasonable period. The
8 result is that those costs are then shifted to existing customers through rate
9 increases. Additionally, if the new customer discontinues gas service, their LEA
10 may become a stranded investment, which is an investment that existing customers
11 continue paying for even though it generates no revenues or benefits.

12
13 For LEAs to be fair to new and existing customers alike, the utility's LEA policy
14 must balance these benefits, costs, and risks. The LEA cap, or "Construction
15 Allowance" as described in NWN's tariff, is intended to balance the costs, benefits,
16 and risks. The LEA cap establishes balance by preventing the utility from covering
17 the connection costs of new customers whose expected benefits do not outweigh
18 their costs and risks for existing customers.

19
20 **Q. What are the incentives of a for-profit utility regarding LEAs?**

21 A. It is important to note that a for-profit utility is incented to cover higher LEAs for
22 several reasons. First, a higher LEA is a larger investment and subsequently

⁶ Exhibit CUB/404, Garrett "Stranded LEA Costs"

1 provides a larger return on the investment, i.e. profit, through rate base financing.
2 Second, a higher the LEA provides more incentive for a new customer to connect to
3 the utility. More customers bring more throughput, which in turn drives other
4 investments a for-profit utility can make to increase their investment portfolio and
5 opportunity for profit. Finally, since LEAs are relatively small and dispersed
6 investments, tracking them for their ongoing used and useful status is challenging,
7 reducing the risk that the LEA will be found not used and useful and disallowed
8 from the utility's rate base.

9

10 **Q. What is "LEA overspend"?**

11 **A.** LEA overspend occurs when a utility provides LEAs for new customers that exceed
12 its LEA policy's LEA cap. For instance, if a utility's LEA cap is \$2,300, but the
13 utility exceeds that cap and provides a new customer an LEA of \$4,300, then the
14 utility overspent on the LEA by \$2,000. As discussed previously, an LEA that is too
15 high results in net harm to existing customers, who incur unreasonably high rates to
16 cover the LEA. LEA overspend also sends the wrong market signals to housing
17 developers by making gas service, and thus the installation of gas appliances in new
18 homes, appear more cost effective than it should.

19

20 **Q. What was NW Natural's LEA policy from 2018 to 2023?**

21 **A.** The Company's LEA policy is found in tariff Schedule X. The Company's
22 Schedule X changed on November 1, 2022, as per Commission Order 22-388, so
23 the Company had two LEA policies from 2018 to 2023.

1 The Company’s former version of Schedule X, which was active from November 1,
2 2012, to October 31, 2022, said “The Construction Allowance [i.e. LEA cap] per
3 residential dwelling is based upon the gas-fired appliances to be installed, as set
4 forth in the table below:”⁷

5 ***Table 1: depicting NWN’s former LEA cap in Schedule X tariff on file from***
6 ***November 1, 2012, to October 31, 2022.***



Residential

The Construction Allowance per residential dwelling is based upon the gas-fired appliances to be installed, as set forth in the table below:

Category	Description	Notes	Construction Allowance (per Premise)
A	Primary Natural Gas space heating (does not apply to centralized space heating that serves multiple units)	1	\$2,875
B	Primary Natural Gas water heat (does not apply to centralized water heating that serves multiple units) Natural Gas heating fireplace for primary space heating Natural Gas wall heat for primary space heating	2	\$2,100
C	Range, Cook top, Clothes dryer	3	\$ 850
D	Gas barbecue, log lighter, gas log, tiki torch, Bunsen burner, pool, spa, or hot tub water heaters, standby space heating equipment including but not limited to natural gas back-up to electric heat pumps; non-primary space or water heat equipment; equipment installed in a detached garage, shop, or outbuilding	4	\$0

- [1] Alone or in combination with any additional Category A-D gas-fired appliances.
- [2] Alone or in combination with any additional Category B-D gas-fired appliances.
- [3] Alone or in combination with any additional Category C-D gas-fired appliances.
- [4] Alone or in combination with any additional Category D gas-fired appliances.

7

8

9 The policy sets different LEA caps for residential customers based on their
10 appliances. From November 1, 2012, to October 31, 2022, the highest LEA cap for
11 customers with gas space heating was \$2,875. The policy also said, “[i]f the
12 Construction Allowance applicable to an Applicant is less than the construction
13 cost, then a Construction Contribution will be required.”⁸

14

⁷ See Exhibit CUB/402, Garrett – “NWN Schedule X active from November 1, 2012, to October 31, 2022”.

⁸ Exhibit CUB/402, Garrett – “NWN Schedule X”.

1 As per Commission Order 22-388, the Company’s current LEA cap is set to a
2 multiple of the average residential customers’ margin revenue,⁹ which from
3 November 2022 to November 2023 resulted in an LEA cap of \$2,300. The
4 Company’s current Schedule X language is largely carried over from its former
5 policy, although the section on the criteria for determining per-residential customer
6 LEAs cap varies. It states, “The Construction Allowance [i.e. LEA cap] per
7 residential dwelling will be equal to the factor shown below times the annual
8 margin using the Base Rate and Base Adjustment from the applicable Rate
9 Schedule times the annual estimated therm usage attributable to the Applicant’s
10 particular installation.”¹⁰

11
12 To summarize, from November 1, 2012, to October 31, 2022, the Company’s
13 maximum residential LEA was capped at \$2,875. From November 1, 2022, to
14 November 1, 2023, the maximum LEA was capped at \$2,300. Both LEA policies
15 established Construction Allowances (i.e. LEA caps) on a per-customer basis,
16 meaning not all customers were eligible for the maximum LEA, and required a
17 Construction Contribution from new customers when the cost of their gas
18 connection exceeded the customer’s maximum allowable LEA.

19 ///

20 ///

⁹ UG 435, *In the Matter of NORTHWEST NATURAL GAS COMPANY, dba NW NATURAL, Request for a General Rate Revision. Order No. 22-388 at 52, (Oct. 24, 2022)*
<https://apps.puc.state.or.us/orders/2022ords/22-388.pdf>.

¹⁰ See Exhibit CUB/402, Garrett – “NWN Schedule X”.

1 **Q. Did the Commission provide for any extenuating circumstances or exceptions**
2 **to the LEA cap?**

3 A. I am not aware of the Commission approving exceptions to the LEA caps in the
4 Company's two LEA policies.
5

6 **Q. Did NW Natural overspend on LEAs?**

7 A. Information revealed in NW Natural's response to OPUC DR 138 during discovery
8 and analysis by the Coalition in Opening Testimony¹¹ suggests the Company spent
9 excessive amounts on residential LEAs since at least 2018. In Opening Testimony,
10 Coalition Witness Cebulko examined the Company's past LEAs and conducted an
11 analysis of the "overage" the Company spent on residential LEAs since 2018.¹²
12 Witness Cebulko found that the Company overspent on LEAs by \$16.2 million.¹³
13 My examination of the data¹⁴ supports Coalition Witness Cebulko's analysis and
14 reveals the following information about the LEA overspend. Table 2 provides key
15 figures regarding the Company's residential LEA overspend since 2018.¹⁵

16 ///

17 ///

18 ///

19 ///

20 ///

¹¹ UG 490 – Coalition/100 Cebulko/Pages 37 – 43 (citing NWN response to OPUC DR 138).

¹² UG 490 – Coalition/100 Cebulko/Pages 37 - 43.

¹³ UG 490 – Coalition/100 Cebulko/Page 43.

¹⁴ Exhibit CUB/403, Garrett – "LEA Overspend".

¹⁵ Exhibit CUB/403, Garrett – "LEA Overspend" Table 2.

Table 2: shows information on residential LEA Overspend Since 2018¹⁶

Total LEA Spending	\$84,625,882
LEA Count	40,136
Total LEA Overspend	\$16,232,335
Total Undepreciated LEA Overspend	\$13,741,872
LEA Overspend as Percentage of Company LEA Spending	19.2%
Portion of all LEAs with Overspend	18.9%
Total Incidences of Overspend	7,599
Average Overspend	\$2,136
Count of LEAs Over \$10,000	345
Highest LEA	\$86,553
Total Incidences of Customer Contribution	4,149
Average Customer Contribution	\$1,157

1

2

Despite the Company’s \$2,875 and \$2,300 residential LEA caps,¹⁷ since 2018 the

3

Company provided 345 residential LEAs exceeding \$10,000 for new customers. It

4

provided LEAs greater than \$25,000 every year, including a single residential LEA

5

of \$86,553 in 2021.¹⁸ At least 18.9% of the Company’s residential LEAs exceeded

6

the maximum LEA cap of its policies and at least 19.2% of the \$84.6 million spent

7

on LEAs was overspend.

8

9

Since 2018, out of the 40,136 new residential connections to NWN’s system, 7,599

10

of the Company’s LEA financing exceeded the maximum LEA cap (referred to as a

11

Construction Allowance in Schedule X), and the average overspend per LEA was

¹⁶ *Id.*

¹⁷ See Exhibit CUB/402, Garrett – “NWN Schedule X”.

¹⁸ Exhibit CUB/403, Garrett - “LEA Overspend”.

1 \$2,136. Interestingly, by comparison, the Company only collected a Customer
2 Contribution for 4,149 new connections, and the average customer contribution was
3 just \$1,157. Recall from the Company’s Schedule X that “[i]f the Construction
4 Allowance [i.e. LEA cap] applicable to an Applicant is less than the construction
5 cost, then a Construction Contribution will be required.” Overall, the Company
6 overspent on LEAs by at least \$16.2 million, while collecting just \$4.8 million from
7 new Customer Contributions.

8
9 My analysis shows that the Company frequently and significantly exceeded the
10 LEA caps in its two Schedule X tariffs since 2018. Overspend occurred nearly
11 twice as often as new Customer Contributions, and the average overspend was
12 nearly twice the value of the average new Customer Contribution.¹⁹

13
14 Furthermore, when the actual cost of a line extension was less than NW Natural’s
15 initial estimate, the new customer received a refund of whatever portion of their
16 Construction Contribution was not spent.²⁰ Conversely, if the actual cost of the line
17 extension exceeded the initial estimate and the LEA CAP, the new customer paid
18 nothing. Instead, NW Natural covered (i.e. rate base financed) the overspend,
19 passing significant excess costs onto existing customers.

20
21 Altogether, the Company’s execution of its residential LEA policy strongly favored
22 expanding the gas system by over-incenting new customer connections and resulted

¹⁹ *Id.*

²⁰ *See* Exhibit CUB/402, Garrett - “NWN Schedule X”.

1 in excessive additions to rate base, which drive unreasonable expenses for existing
2 customers. The LEA overspend aligns with the Company's profit motive, because a
3 larger rate base enables higher returns on investments.

4
5 **Q. What was the Company's response to Coalition Witness Cebulko's**
6 **identification of the LEA overspend in Opening Testimony?**

7 A. The Company argued the examples of overspend were instances wherein
8 construction costs exceeded initial estimates and the Company covered the
9 difference as per its contracts with new customers.²¹ The Company states,

10 Given the very nature of construction work there will be a high
11 variability of job types and site conditions, which may lead to
12 volatility between an estimate and actual costs. Even jobs that have a
13 site-specific estimate are subject to higher than estimated
14 construction costs. An estimator may not truly know the site
15 conditions, such as rocky soil, until construction commences.
16 Ultimately the Company honors the signed agreement with the
17 customer, and these costs are included in plant whether or not
18 construction costs are higher than estimated.²²

19
20 First and foremost, although I am not a lawyer, it is my understanding that the
21 Company should not be executing contracts that violate the terms of its tariff on
22 file. Second, under this explanation, if the actual construction costs exceed the
23 initial estimate, NWN rate-bases the difference, harming existing customers. Yet, if
24 the actual construction costs are below the initial estimate, NWN will potentially
25 issue a refund for existing customers that made Construction Contribution. It's a
26 lose-lose situation for existing customers.

27

²¹ UG 490 – NW Natural/4100 Zaubi/Pages 12 -14.

²² UG 490 – NW Natural/4100 Zaubi/Page 13 Lines 8-14.

1 **Q. What other arguments does the Company make?**

2 A. The Company argues that the net impact of its “portfolio of customers” was
3 beneficial to existing customers based on a 25-year DCF analysis.²³

4
5 **Q. Does the Company’s use of a “portfolio of customers” justify the LEA**
6 **overspend?**

7 A. No. The Company’s explanation of the LEA overspend does not align with its LEA
8 tariff. As Coalition Witness Cebulko noted in Opening Testimony, Schedule X
9 describes maximum construction allowances for *individual* residential customers²⁴
10 and not for the “portfolio of customers” Company Witness Zaubi assesses.²⁵

11 There is a substantial difference between capping the amount the Company will
12 spend on individual customers and a “portfolio of customers.” When the LEA cap is
13 applied to individual customers, it prevents the Company from overspending on *any*
14 new connections or adding *any* customers that are expected to result in net costs for
15 existing customers. Conversely, a portfolio approach allows much more expensive
16 connections and LEAs, so long as other new connections are lower than the LEA
17 cap and bring down the average LEA. The portfolio approach enables much higher
18 spending on new customer connections than adhering to a per-customer LEA cap
19 like those described in the Company’s tariff.

20

²³ UG 490 – NW Natural/4100 Zaubi/Pages 13 -14.

²⁴ UG 490 – Coalition/100 Cebulko/Pages 38.

²⁵ UG 490 – NW Natural/4100 Zaubi/Pages 13 -14.

1 **Q. How did the Company’s practices undermine the fair balancing of new and**
2 **existing customers’ interests?**

3 A. The practice of overspending on LEAs undermines the fair balancing of new and
4 existing customers’ interests. The Company’s LEA practices favored new
5 customers and growing the gas system over preventing overspend and protecting
6 existing customer from unreasonable costs. The Company acknowledges that LEA
7 estimates are liable to vary from actual costs,²⁶ creating a known risk that actual
8 costs will exceed the estimate. Examining the Company’s LEA data shows that
9 LEAs exceeded that maximum cap at least 18.9% of the time and the average
10 overage for an LEA that exceeded the cap was \$2,136,²⁷ which is nearly as high
11 (93%) as the Company’s 2023 LEA cap (\$2,300).

12
13 **Q. What limits were in place if the actual costs were over the estimates?**

14 A. The Company’s own contracts seemingly obliged it to commence with
15 extraordinarily expensive connections and cover as much as tens of thousands of
16 dollars above the LEA cap per connection. As such, the contracts offered total
17 protection from actual costs exceeding the estimate for new customers, and even
18 refunds if a new customer’s Customer Contribution was not entirely spent,²⁸
19 without protecting existing customers from LEA overspend at all.

20 ///

21 ///

²⁶ UG 490 – NW Natural/4100 Zaubi/13, lines 8-14.

²⁷ Exhibit CUB/403, Garrett - “LEA Overspend”.

²⁸ See CUB/402, Garrett - “NWN Schedule X”.

1 **Q. What are the Company’s incentives regarding overspending on LEAs?**

2 A. Due to its profit-motive, the Company benefits from overspending on higher LEAs.
3 Higher LEAs increase the Company’s rate base and opportunity for return on
4 investments. Higher LEAs also enable it to connect more expensive customers to its
5 system, increasing its customer base, throughput, and potential for other system
6 upgrades that increase its rate base and opportunity for return on investments.

7
8 **Q. What is your recommendation for addressing LEA overspend since 2018?**

9 A. I recommend removal of the undepreciated LEA overspend since 2018, which I
10 estimate is \$13,741,872.²⁹

11
12 **Q. What is the “undepreciated LEA overspend” and why do you think it is an
13 appropriate amount to remove from rate base in this proceeding?**

14 A. Undepreciated LEA overspend describes the LEA overspend that remains in rate
15 base today despite the partial depreciation of the LEAs the Company overspent on
16 since 2018. Coalition Witness Cebulko’s analysis of LEA “overage” since 2018
17 includes some LEA overspend that the Company has already collected from
18 ratepayers through rates since 2018, and therefore no longer resides in rate base.
19 Although I am not a lawyer, it is my understanding that this money is probably not
20 eligible for removal, Thus, I conducted an analysis to estimate the LEA overspend
21 remaining in rate base today, i.e. the undepreciated LEA overspend.

22

²⁹ Exhibit CUB/403, Garrett - “LEA Overspend”.

1 **Q. How did you estimate the undepreciated LEA overspend in rate base?**

2 A. Establishing the exact undepreciated LEA overspend would require case-by-case
3 examinations of thousands of residential LEAs. Both of the Company's LEA
4 policies since 2018 established unique residential LEA caps based on attributes of
5 individual customers.³⁰ Further, the date each LEA was rate based and what portion
6 of the LEA is attributable to which asset-type both affect how much undepreciated
7 LEA overspend remains in rate base today.

8
9 To avoid conducting case-by-case analyses of thousands of residential LEAs, I used
10 three basic assumptions that allowed me to estimate the cumulative undepreciated
11 LEA overspend from thousands of residential LEAs since 2018. Notwithstanding
12 the reasonableness of my approach, I do not oppose the Commission ordering an
13 audit of the Company's undepreciated LEA overspend and recommend that if it
14 does, the Commission's audit extend further back than 2018. Major assets within
15 residential LEAs have useful lives of 65 – 100+ years, meaning undepreciated LEA
16 assets, and perhaps overspend like we have observed since 2018, may reside in rate
17 base from LEAs going back decades.

18
19 The three assumptions that enabled my LEA overspend analysis were as follows:

- 20 1. Straight-line depreciation at a 0.016667 (60-year) depreciation rate
21 for entire residential LEAs.
22
- 23 2. All LEAs were rate based mid-year, meaning that by the time the Test
24 Year begins in November, 2024, a 2023 LEA is approximately 1.5
25 years depreciated, a 2022 LEA is approximately 2.5 years
26 depreciated, etc.

³⁰ Exhibit CUB/402, Garrett - "NWN Schedule X".

- 1
2 3. All customers that received LEAs were eligible for the maximum
3 LEA possible under the Company’s LEA policies (\$2,875 or \$2,300).
4
5

6 Based on my analysis, I estimate that \$13,741,872 of the \$16,232,335 LEA
7 overspend since 2018 is undepreciated in rate base³¹ and I propose its removal.
8

9 **III. Opposition to the Company’s Proposed LEA Policy**

10 **Q. Briefly summarize the key components of your Opening Testimony on**
11 **NW Natural’s proposed LEA policy.**

12 A. In Opening Testimony, I argued that the Company’s proposed LEA policy incents
13 risky growth of the gas system and is liable to create costly stranded assets that
14 would harm NW Natural’s customers. I identified that the Company’s proposed
15 growth policy assigns new customers higher rates for less service. I challenged the
16 strength of the efficiency-incentive in the LEA policy and identified concerns over
17 the assumed longevity of the “low use” customers NW Natural was targeting. I
18 presented competitive alternatives to the Company’s gas service, including
19 burgeoning heat pump options and using gasoline/propane backup generators as an
20 alternative form of resiliency during an electrical outage. I argued that given these
21 challenges to retaining new customers, it was important to consider the impacts of
22 customer attrition within 25 years on the Company’s LEA policy. I modeled the
23 stranded asset costs associated with a range of customer attrition scenarios to

³¹ Exhibit CUB/403, Garrett - “LEA Overspend”.

1 illustrate the harmful effects of customer attrition and the riskiness of the
2 Company's LEA policy.

3
4 In addition to challenging its assumption that 100% of new customers will remain
5 customers for the 25-year period of its DCF analysis, I challenged other key
6 modeling assumptions. I challenged the reasonableness of its proxy CPP
7 compliance cost assumptions. I argued that the Company's "economy of scale" new
8 customer benefit was not a pure economy of scale benefit³² and that its rapidly
9 rising "benefit" over the course of 25 years signaled a rate increase for new
10 customers which, as modeled, would nearly double new customers' rates by itself.

11
12 I concluded that the Company's proposed LEA policy does not adequately consider
13 customer attrition, is founded on unreasonable assumptions, and poses unreasonable
14 risks to existing customers. I recommended a phase down of the LEA to \$0.

15
16 **Q. Briefly summarize Company Witness Therrien's reply to your Opening**
17 **Testimony on NW Natural's proposed LEA policy.**

18 A. Witness Therrien rebukes my critique of the Company's novel LEA policy design
19 and asserts that its design and incentives align with Commission Order 22-388 and
20 the Company's efficiency-oriented responsible growth plan.³³ Witness Therrien
21 argues that CUB's concerns over customer attrition are unfounded because my

³² The benefit is calculated by dispersing very high non-growth capital expenses the Company forecasts across new customers. The benefit the new customer provides is the portion of the rate increase for the non-growth capital expense that the new customer would pay for, seemingly through higher rates.

³³ UG 490 – NW Natural/4000 Therrien/Page 22, Lines 3-15 and Page 26.

1 claim that lower usage customers may not stay on the system for long enough to
2 recover the cost of the LEA is unsubstantiated³⁴ and because I did not convincingly
3 show that gas service is becoming uncompetitive with electric service.³⁵ Witness
4 Therrien describes my outlook for gas as “overly pessimistic.”³⁶ Witness Therrien
5 rejects my critiques of the Company’s LEA modeling, arguing that the LEA model
6 is a simple DCF model that only includes reasonable assumptions and inputs
7 provided by the Company.³⁷ Witness Therrien suggests that I confuse the
8 depreciable life of an asset (e.g., service line 60-year life) with the 25-year DCF
9 analysis.³⁸

10
11 **Q. Provide a brief overview of your response to Witness Therrien’s Reply**

12 **Testimony.**

13 A. First, I reexamine the actual incentives within the Company’s proposed LEA policy
14 alongside its efficiency-oriented responsible growth plan, which the Company
15 frequently invokes while responding to my Opening Testimony. I again find that the
16 Company’s LEA is not efficiency-oriented and reassert that the Company does not
17 fairly consider or model the longevity of the new customers in its growth policy
18 targets.

19

³⁴ UG 490 – NW Natural/4000 Therrien/Page 26.

³⁵ UG 490 – NW Natural/4000 Therrien/Pages 22-25 and 32.

³⁶ UG 490 – NW Natural/4000 Therrien/Page 22, Line 12.

³⁷ UG 490 – NW Natural/4000 Therrien/Pages 28 – 30.

³⁸ UG 490 – NW Natural/4000 Therrien/Pages 35.

1 Next, I reject the Company’s claim that I did not provide sufficient support for my
2 concerns over new customer attrition creating costly stranded assets that would
3 harm residential customers. The Company’s insistence that I did not provide a
4 comparison of its future gas rates and electric alternatives sets an unreasonable bar
5 for raising genuine concerns over the longevity of the new customers it targets. I
6 reassert my argument that charging higher rates for lower usage in a market with
7 increasingly competitive alternatives, and selling a product that is increasing
8 disfavored because of its health and environmental impacts, is likely to result in
9 customer attrition and costly stranded assets.

10
11 I conclude by arguing the Company failed to satisfactorily meet the requirements
12 the Commission set in Order 22-388 for proposing a new LEA policy. I argue that
13 the minor adjustments to its LEA policy made between its Initial Filing and Reply
14 Testimony still result in unreasonable decarbonization compliance costs, an
15 unreasonable timeframe over which customers remain on the system, and
16 inadequate consideration of stranded asset costs. I argue that the Company’s
17 proposal does not fairly balance the interests of new and existing customers and
18 uphold my recommendation to phase down the Company’s LEA to \$0.

19
20 **Q. What is the Company’s Proposed LEA policy?**

21 A. Table 3 shows the Company’s “Revised LEA” proposed in Reply Testimony
22 and is revised from the initial filing.³⁹ A Tier 1 LEA recipient is expected to use

³⁹ UG 490 – NW Natural/2200, Kravitz/ Page 25.

1 0-250 therms/ year and receive a maximum LEA of \$3,400, a Tier 2 LEA recipient
 2 is expected to use 251-450 therms/ year and receive a maximum LEA \$2,900, etc.
 3 Customers expected to have lower expected usage, because they have fewer and/or
 4 lower-use gas appliances installed, could qualify for a higher Tier LEA. Table B in
 5 Exhibit CUB/407, Garrett “NWN LEA Efficiency Incentive”, contains a list of
 6 possible gas appliances and their expected load in therms, which can be used to
 7 determine which LEA Tier a customer would receive based on their gas
 8 appliances.⁴⁰

9 **Table 3: NW Natural’s LEA policy proposal over the course of UG 490⁴¹**

Revised LEA Results

UPC (Therms)	0-250	251-450	451-650	651+
Direct Testimony LEA	\$3,600	\$3,100	\$2,600	\$1,800
Supplemental Testimony Proposal	\$3,700	\$3,300	\$2,950	\$2,200
Revised LEA	\$3,400	\$2,900	\$2,500	\$1,700
Difference: Higher / (Lower)	(\$300)	(\$400)	(\$450)	(\$500)

10

11 **Q. The Company asserts that its LEA policy supports its efficiency-oriented⁴²**
 12 **responsible growth plan.⁴³ Do you agree?**

13 A. The Company’s LEA policy incents a single higher-efficiency outcome, but only
 14 weakly, and this outcome is not the most efficient one available to Oregonians with
 15 new homes. Otherwise, the policy incents: 1. business-as-usual growth of the gas
 16 system for highly inefficient gas furnace space heating and 2. connecting very low
 17 use customers that I am still concerned present a high risk of customer attrition.

⁴⁰ Exhibit CUB/407, Garrett “NWN LEA Efficiency Incentive”/Table B.

⁴¹ UG 490 – NW Natural/4000 Therrien/Page 26.

⁴² UG 490 – NW Natural/100 Palfreyman-Kravitz/ Page 3 Lines 19 – 23 and Page 4 Lines 1- 3.

⁴³ UG 490 – NW Natural/4000 Therrien/Page 26.

1 These outcomes are more aligned with the Company’s profit-motive to invest in the
2 growth of its distribution system, even despite the risk of creating stranded
3 investments that would harm its customers.

4
5 **Q. Please explain.**

6 A. The LEA policy incents the following outcomes for new customers:

7 **1. Connecting to the gas system: \$1,700 - \$3,400.**

8 The policy incents any new residential connection to the gas system.
9 The LEA caps per-customer range from \$1,700 to \$3,400 depending
10 upon the gas appliances the customer has installed in their home.

11
12 **2. Installing fewer gas appliances for lower use applications:
13 \$400-\$1,700.**

14 A new customer could qualify for a higher-tier LEA worth \$400-
15 \$1,700 more by installing fewer gas appliances and/or appliances with
16 lower-use applications. There are no incentives for installing higher-
17 efficiency versions of appliances (such as a more efficient model of a
18 water heater, heated pool, or spa) aside from the opportunity described
19 below.

20
21 **3. Installing an electric heat pump and a backup gas furnace:
22 \$400-\$1,200.**

23 A customer could qualify for a higher-tier LEA worth \$400-\$1,200
24 more by installing a hybrid heating system rather than a standalone gas
25 furnace for space heating.⁴⁴ This is the only possible higher-efficiency
26 outcome per the policy’s design⁴⁵ and the efficiency is achieved by
27 transferring space heating load to the electric grid, where the same task
28 is handled more efficiently by a heat pump.⁴⁶

29
30 The only efficiency incentive is very limited. The incentive to install hybrid heating
31 (\$400-\$1,200) is even smaller than the baseline incentive to connect to the gas
32 system and use a lot of gas (\$1,700). This efficiency incentive would only be

⁴⁴ Exhibit CUB/407, Garrett – “NWN LEA Efficiency Incentive”.

⁴⁵ *Id.*

⁴⁶ Crownhart, Casey. “Everything you need to know about the wild world of heat pumps”, MIT Technology Review (Feb. 14, 2023) <https://www.technologyreview.com/2023/02/14/1068582/everything-you-need-to-know-about-heat-pumps/> (last visited Jun. 23, 2024)

1 impactful if the customer’s line extension was costly enough to benefit from a
2 \$400-\$1,200 higher cap. Further, the Company’s plan entails new customers
3 installing expensive hybrid heating systems, when hybrid heating only appears to
4 make sense in climates that regularly experience frigid temperatures.⁴⁷ The
5 American Council for an Energy-Efficient Economy (ACEEE) reports that, for
6 most homes in the Pacific Northwest, electric heat pumps have a lower lifecycle
7 cost when compared with hybrid heat pumps, gas heat pumps, and
8 furnace/boilers.⁴⁸ See Table 4 below.

9 ///

10 ///

11 ///

12 ///

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14 ///

15 ///

16 ///

17 ///

18 ///

⁴⁷ See Lawrence Bonk, “How Much Does Heat Pump Installation Cost?”, Forbes Home (Feb. 29, 2024), <https://www.forbes.com/home-improvement/hvac/heat-pump-installation-cost/> (last visited Apr. 17 2024)

⁴⁸ Lauren Ross *et al.*, *Analysis of Electric and Gas Decarbonization Options for Homes and Apartments*, American Council for an Energy-Efficient Economy, at 37-38 (September 2022) <https://www.aceee.org/sites/default/files/pdfs/b2205.pdf>; Crownhart, Casey. “Everything you need to know about the wild world of heat pumps”, MIT Technology Review (Feb. 14, 2023) <https://www.technologyreview.com/2023/02/14/1068582/everything-you-need-to-know-about-heat-pumps/> (last visited Jun. 23, 2024) “There are heat pumps running everywhere from Alaska to Maine in the US. And about 60% of buildings in Norway are heated with heat pumps, along with 40% in Sweden and Finland. Heat pumps can work efficiently even in the coldest places.”

Table 4: From ACEEE report showing the distribution of minimum life-cycle cost by geographic region. Oregon is included in the Pacific region.⁴⁹

Percentage of homes with minimum life-cycle cost

Census region	Electric heat pump	Hybrid	Gas heat pump	Furnace or boiler
East North Central	23%	49%	18%	11%
East South Central	98%	0%	0%	2%
Middle Atlantic	57%	13%	8%	22%
Mountain North	31%	48%	3%	18%
Mountain South	83%	3%	6%	8%
New England	30%	58%	3%	9%
Pacific	82%	3%	1%	14%
South Atlantic	96%	0%	0%	4%
West North Central	40%	34%	13%	13%
West South Central	96%	0%	0%	4%

The highest percentage in each row is shaded; darker shading indicates that the percentage is over 80%.

Hybrid systems may make sense for existing customers who already have gas furnaces and could keep them as a backup to a new heat pump. In their case, the gas connection, in-house piping, and gas furnace are already installed, and their gas rates are not New Premises rates. However, it makes little sense for new customers to choose hybrid heating for new homes, incurring higher rates (the New Premises \$26.25 customer charge) for new pipes and expansion of the gas system, only to use less gas usage and for occasional backup heating. NWN has not presented testimony that hybrid heating presents a more economic option than standalone electric heat pumps for new homes in the relatively mild climate of NW Natural's Oregon service territory, especially with the New Premises \$26.25 customer charge

⁴⁹ *Id.* at 38, Table 3.

1 and if the price of decarbonized gas rises faster than the price of decarbonized
2 electricity.

3
4 Furthermore, efficiency-wise the most common and affordable variety of heat
5 pumps—air-source heat pumps—retain their efficiency advantage over gas furnaces
6 at temperatures well below freezing.⁵⁰ The wide efficiency gap between heat pumps
7 and gas furnaces will only widen as better refrigerants that increase the efficiency of
8 heat pumps (already being used in Europe) hit the growing U.S. heat pump
9 market.⁵¹ While heat pump technology is rapidly improving and gaining efficiency,
10 furnace technology has essentially already reached its theoretical optimal
11 efficiency, so it cannot improve any further.⁵²

12
13 The following excerpt from the MIT Technology Review highlights the important
14 role of highly efficient heat pumps for addressing climate change:

15 Heating buildings frequently relies on natural gas or heating oil,
16 which is why the sector accounts for about 10% of global emissions
17 today. Heat pumps will be the central technology used to cut
18 heating’s climate impact, predicts Yannick Monschauer, an energy
19 analyst at the International Energy Agency.
20

⁵⁰ Masik et al., “Empirical Study of the Effect of Thermal Loading on the Heating Efficiency of Variable-Speed Air Source Heat Pumps.” *Sustainability* (Jan. 18, 2023) at Figure 3, <https://doi.org/10.3390/su15031880>.

⁵¹ See Masik et al., “Empirical Study of the Effect of Thermal Loading on the Heating Efficiency of Variable-Speed Air Source Heat Pumps.” *Sustainability* (Jan. 18, 2023) <https://doi.org/10.3390/su15031880>; see also Crownhart, Casey. “Everything you need to know about the wild world of heat pumps”, MIT Technology Review (Feb. 14, 2023). <https://www.technologyreview.com/2023/02/14/1068582/everything-you-need-to-know-about-heat-pumps/> (last visited Jun. 23, 2024).

⁵² See Crownhart, Casey. “Everything you need to know about the wild world of heat pumps”, MIT Technology Review (Feb. 14, 2023). <https://www.technologyreview.com/2023/02/14/1068582/everything-you-need-to-know-about-heat-pumps/> (last visited Jun. 23, 2024).

1 Heat pumps run using electricity from the grid. While fossil-fuel
2 plants still help power grids around the world, renewables and low-
3 carbon power sources also contribute. So with the current energy mix
4 in all major markets, heat pumps are better for the climate than
5 directly fossil-fuel-powered heating, Monschauer says.
6

7 Heat pumps' real climate superpower is their efficiency. Heat pumps
8 today can reach 300% to 400% efficiency or even higher, meaning
9 they're putting out three to four times as much energy in the form of
10 heat as they're using in electricity. For a space heater [or gas furnace],
11 the theoretical maximum would be 100% efficiency.⁵³
12

13 If the Company's policy fails to incent hybrid heating, the policy still incents
14 connecting new customers with standalone gas furnaces. A customer with a gas
15 furnace could still qualify for a Tier 2 LEA worth up to \$2,900. Notably, this is
16 *more* than the Company's current or previous LEA caps.⁵⁴
17

18 Gas furnaces are much less efficient than heat pumps, so every gas furnace the
19 Company's LEA policy incents results in a substantially less efficient outcome than
20 meeting new space heating load with an electric heat pump. Given the LEA policy's
21 weak incentive for hybrid heating and enduring incentive for highly inefficient gas
22 furnaces, it is not clear the overall impact of the LEA policy is higher efficiency,
23 and quite likely, its outcome will be *lower* efficiency than if the Company did not
24 have an LEA policy.
25

⁵³ Crownhart, Casey. "Everything you need to know about the wild world of heat pumps", MIT Technology Review (Feb. 14, 2023). <https://www.technologyreview.com/2023/02/14/1068582/everything-you-need-to-know-about-heat-pumps/> (last visited Jun. 23, 2024).

⁵⁴ See Exhibit CUB/402, Garrett – "NWN Schedule X."

1 **Q. Are there other incentives available to residential customers that make the**
2 **most efficient option, space heating with an electric heat pump, affordable**
3 **without involving an LEA for a gas connection?**

4 A. Yes. Through the Inflation Reduction Act (IRA) the U.S. Federal Government is
5 offering a tax credit for air-source heat pumps of up to \$2,000 through 2032,⁵⁵ and
6 the Energy Trust of Oregon’s (ETO) website shows that additional incentive
7 options for electric heat pumps are available in PGE’s service territory,⁵⁶ which
8 covers most of NW Natural’s service territory. As Climate Advocates commented
9 in Avista’s last Integrated Resource Plan (IRP) docket:

[Gas customers] could save as much as \$10,000 on a heat pump with
just IRA benefits alone (pairing rebates with tax incentives), which
would cover the majority or all of the costs of installing a heat pump,
especially for lower-income customers. And thanks to the recently-
passed “Climate Resilience” package (HB 3409), Oregon now has a
goal of installing 500,000 heat pumps by 2030, with a variety of
programming expected to help deploy these heat pumps across the
state.⁵⁷

18
19 Importantly, these federal and state legislative incentives are not paid for through
20 NW Natural’s customers’ bills, and are not limited to gas or hybrid heat pumps,
21 meaning they offer unfettered customer choice.

22

⁵⁵ Energy Star, “Air Source Heat Pumps Tax Credit.” <https://www.energystar.gov/about/federal-tax-credits/air-source-heat-pumps> (last visited Jun. 20, 2024).

⁵⁶ Energy Trust of Oregon (ETO), “Heating Solutions Incentives: Search Incentives” <https://www.energytrust.org/residential/incentives/furnace-and-heat-pump/details> (last visited Jun. 26, 2024).

⁵⁷ LC 81, *In the Matter of AVISTA GAS COMPANY 2023 Integrated Resource Plan*, Climate Advocates’ Opening Comments on Avista’s 2023 Natural Gas IRP at 6 (Aug. 29, 2023) (citing Samayoa, M. “Oregon’s latest climate package targets building resilience, and hefty federal dollars” (June 28, 2023), OPB, <https://www.opb.org/article/2023/06/28/oregon-climate-change-environment-portland-politics-heatdome-resilience-package-extreme-weather/>).

1 **Q. Why are you concerned that very low use customers present a higher risk of**
2 **customer attrition?**

3 A. The Company's LEA policy incents customers that connect to its system to install
4 fewer and lower use gas appliances. Fewer and lower use appliances reduce the new
5 customer's tie to the gas system because there are fewer appliances to find non-gas
6 substitutes for if the customer considers leaving, and many of the lower use
7 applications are less essential than the Company's current primary load driver,
8 primary space heating. With a weaker connection to the gas system alongside
9 higher New Premises rates, which would result in customers paying \$26.25/month
10 and \$315/year just to be connected to the gas system, I argue it is reasonable to
11 question the longevity of the new customers the Company is targeting.

12
13 **Q. The Company argues that this is an unreasonable concern because you do not**
14 **cite analyses showing that gas service is becoming uncompetitive relative to**
15 **electric service⁵⁸— is this reasonable?**

16 A. No, this is a misleading argument. I do not cite studies or analyses of the
17 Company's proposed growth and service models becoming uncompetitive because
18 its strategies appear to be truly unique, and I am not aware of any such analyses
19 examining them. The Company's plan to charge new customers higher rates for
20 fewer and lower use applications of gas is novel, so I cannot reference a study on
21 how much customer attrition may ensue. In Opening Testimony, I modeled a range
22 of customer attrition scenarios to illustrate a range of possibilities.⁵⁹ The modeling

⁵⁸ UG 490 – NW Natural/4000 Therrien/Pages 24 – 25.

⁵⁹ UG 490 – CUB/200 Garrett/Pages 24-26.

1 showed how costly stranded LEA investments are. I estimated that just 1% annual
2 gradual customer attrition would result in \$43 million in stranded investment after
3 10 years, and that a single 25% customer attrition event after 15 years (about when
4 heating appliances are replaced) would result in \$11.8-\$14.5 million in stranded
5 investment.⁶⁰

6
7 Further, the Company's decarbonization plans beyond Renewable Natural Gas
8 (RNG) involve renewable hydrogen, which the Commission acknowledged presents
9 high uncertainties in Order No. 23-281.⁶¹ Renewable hydrogen and synthetic
10 methane are not commercially available and face many obstacles before either
11 could be safely and reliably integrated into gas LDCs, so I cannot confidently
12 model the Company's decarbonized fuels costs for a gas versus electric comparison
13 either.

14
15 Finally, the Company's own comparisons of its service to electric utilities rely on
16 its non-acknowledged IRP and omit key information about electric utilities
17 decarbonizing. For instance, every electric customer that switches from resistance
18 space heating to a heat pump makes space on the grid for multiple gas conversions
19 to electric, but the Company seems to suggest that all gas heating load, if electrified,
20 would stack upon the grid's current winter peaking load.⁶²

21

⁶⁰ UG 490 – CUB/200 Garrett/Page 26.

⁶¹ *In the Matter of Northwest Natural Gas Company*, 2022 Integrated Resource Plan, Docket No. LC 79, Order No. 23-281 at 9. (Aug. 2, 2023), <https://apps.puc.state.or.us/orders/2023ords/23-281.pdf>.

⁶² UG 490 – NW Natural/2200 Kravitz/Page 16.

1 Thus, my assessment of the Company's strategy and its risks relies on fundamentals
2 of economics, which suggest charging higher rates for lower use when competitive
3 and less polluting alternatives are available should drive customer attrition.

4 Furthermore, if the Company's decarbonized fuel costs exceed what it models,
5 which CUB, Staff, and the Coalition all noted was likely in Opening Testimony,
6 then this too will drive higher rates and *possibly* contribute to customer attrition.

7
8 **Q. In Opening Testimony you discussed the risk of continued pipeline buildout
9 becoming stranded assets and examined the financial harm it would cause
10 NW Natural's customers. What was the Company's response to that?**

11 A. NW Natural asserted that this was an unfounded concern and there was no reason
12 for it to curtail growth. The Company described my outlook on gas as "overly
13 pessimistic". My concerns about customer attrition and stranded asset costs,
14 however, are consistent with the Commission's directive:

15 Finally, we find that the current methodology, which assumes customers remain
16 on the system for 30 years with a predictable throughput, is likely too optimistic
17 of an assumption given the changes in the industry that are identified by the
18 parties. We share CUB's concerns around the 30-year timeframe of the current
19 LEA calculation, and about that fact that other components within the
20 calculation assume an even longer life for associated plant.

21
22 In essence, the current methodology would assume a "business as usual"
23 approach well into the future, while the record in these proceedings shows the
24 future is more likely to be an extremely dynamic and different environment for
25 natural gas distribution, including evolving customer preferences and state and
26 local mandates regarding restrictions on service. Most of these changes point
27 toward a trend where at least some existing and future customers are likely to
28 respond to the changes by modifying equipment or taking other purposeful
29 measures to change their fuel consumption. Or, in some cases, their continued
30 usage may be directly impacted by a policy initiative. We find the company's
31 arguments to the contrary not persuasive, given the robust record in these
32 proceedings about the policy changes taking place in the natural gas distribution

1 business. These changes, including the CPP and activities of municipalities or
2 other jurisdictions in potentially enacting limitations on natural gas, point to a
3 reasonable possibility that the company will encounter a trend of decreasing gas
4 usage, potentially driven by economic signals toward fuel switching.⁶³
5

6 Thus, I maintain that the Company has yet to appropriately consider the risks of
7 customer attrition and the costly impacts of stranded LEAs.
8

9 **Q. Do you have updated modeling on stranded LEA costs for the LEA proposal**
10 **the Company provided in Reply Testimony?**

11 A. Yes. Exhibit CUB/404, Garrett – “Stranded LEA Costs” contains modeling adapted
12 from my Opening Testimony⁶⁴ to examine the Company’s Tier 2 (\$2,900) LEA
13 proposed in Reply Testimony as an input. Figure 1 estimates the remaining
14 investment cost of a Tier 2 (\$2,900) LEA as it depreciates over time.

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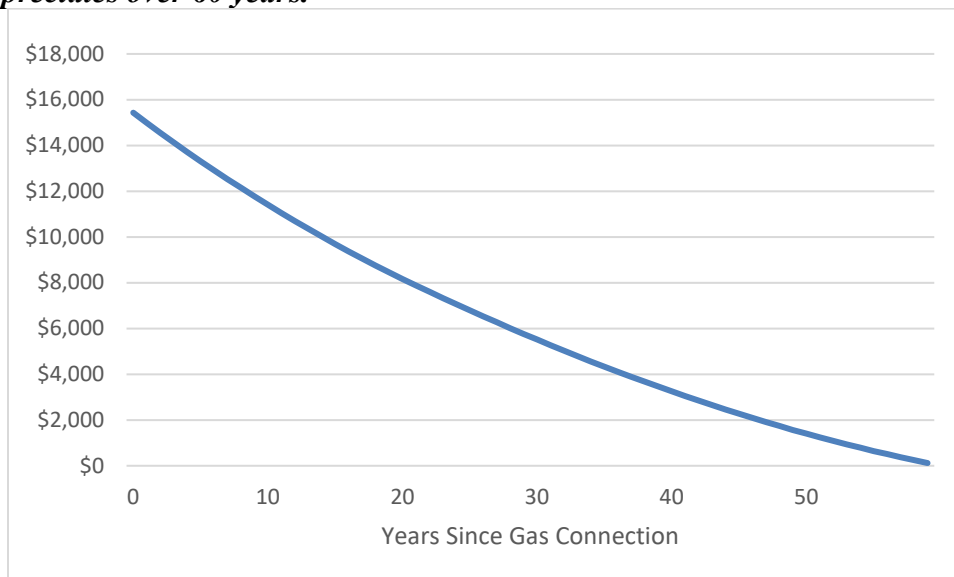
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⁶³ UG 435, *In the Matter of NORTHWEST NATURAL GAS COMPANY, dba NW NATURAL, Request for a General Rate Revision*. Order No. 22-388 (Oct. 24, 2022) <https://apps.puc.state.or.us/orders/2022ords/22-388.pdf>.

⁶⁴ Exhibit CUB/204, Garrett – “LEA Modeling”.

1 **Figure 1: The remaining cost of a single Tier 2 (\$2,900) LEA investment as it**
2 **depreciates over 60 years.**



3
4 Figure 1 can be used to estimate the stranded investment cost that remains for
5 existing customers to pay (y-axis) if one new customer disconnects X years since
6 connecting to the gas system and receiving an LEA (x-axis). For instance,
7 according to the model if a new customer disconnects after 20 years, about \$8,000
8 of the \$15,400 total LEA cost remains to be paid for by existing customers over the
9 next 40 years.

10
11 It is important to note that this analysis assumes a single depreciation rate and
12 amortization period (60 years) for the entire LEA; however, LEAs contain assets
13 with different useful lives and amortization periods. The service line, a major asset
14 within an LEA, has an average useful life of 65 years, but can have a useful life of
15 100+ years.⁶⁵

16

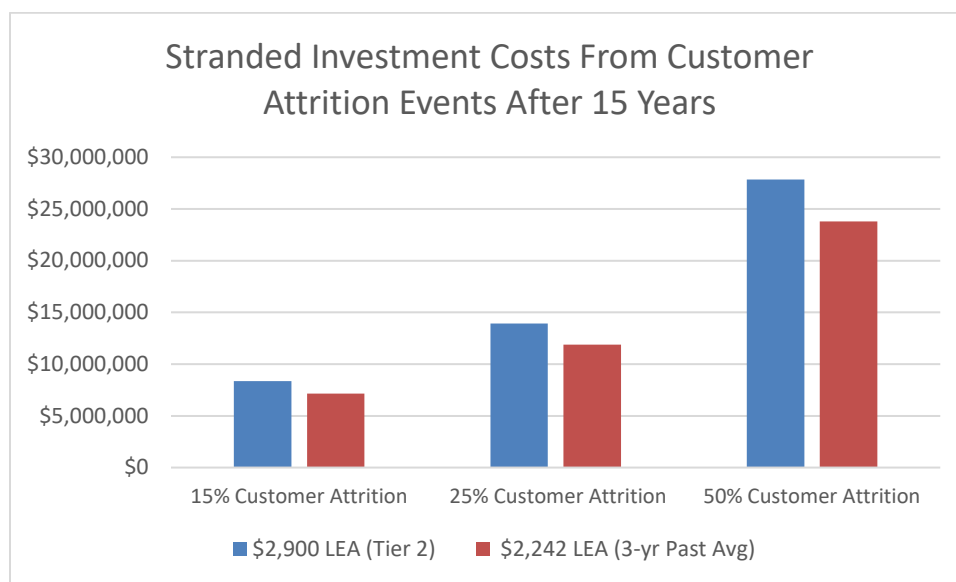
⁶⁵ Exhibit CUB/406, Garrett – “Data Requests”, NWN Response to CUB DR 32.

1 Inputting the Company’s Tier 2 (\$2,900) LEA into my 1% gradual customer
 2 attrition per year model from Opening Testimony results in a net stranded
 3 investment cost of \$40.8 million after 10 years.⁶⁶

4

5 **Figure 2: The stranded investment costs associated with various percentages of**
 6 **customer attrition 15 years after connecting to the gas system.**

7



8

9 Relative to my analysis in Opening Testimony, I extended the lower bound of this
 10 analysis to illustrate the impact of a smaller attrition event at this important juncture
 11 (heating appliances are replaced after about 15 years). It is important to note that the
 12 bars in this graph represent the stranded investment created by various percentages
 13 of *one year’s worth* of new customers discontinuing service 15 years after receiving
 14 an LEA.

15

⁶⁶ Exhibit CUB/404, Garrett – “Stranded LEA Costs”

1 **Q. Regarding your stranded LEA cost modeling, the Company claims you**
2 **“confuse[] the depreciable life of an asset (e.g., service line 60-year life) with**
3 **the 25-year DCF analysis.” Please respond.**

4 A. While the structure of the Company’s LEA model, a DCF analysis with a 25-year
5 time horizon, could be useful in determining an appropriate LEA using reasonable
6 assumptions, it *does not* accurately reflect the remaining investment costs of LEAs
7 through time. LEAs contain assets with long useful lives and repayment periods.
8 My stranded LEA modeling examines a more appropriate timeframe based on how
9 long LEA assets *actually depreciate* and *actually affect* rates. I urge the
10 Commission to consider this, as it has important implications on the enduring
11 impacts of stranded LEAs for customers deep into the future.

12

13 If a new customer contributes enough margin to offset the cost of the LEA over the
14 first 25 years after that LEA is incurred that does not solve the stranded cost
15 problem. Assets in the LEA are being depreciated over a useful life that is as long
16 as 65 years. This means that even after NWN claims the stranded cost problem has
17 been solved, there is another 40 years of depreciation costs and return on the
18 undepreciated investment. During those remaining 40 years, NWN customers will
19 be paying for that asset. Customers in 2070 and beyond will still be paying off
20 costs associated with the original LEA. But it is not clear what the gas system will
21 look like in 2070. If climate change causes gas to be disfavored over electricity,
22 there is a real risk that a shrinking gas system will have fewer customers to pay off
23 the embedded or sunk costs of today’s gas system. And some of the sunk costs will

1 be LEA-related such as the service pipes – some of which will connect to buildings
2 that have electrified. Utility investment that has remaining depreciation but is no
3 longer used and useful is a stranded cost. CUB is not playing semantic games; we are
4 defining a very real stranded cost.

5
6 Furthermore, it is disingenuous of the Company to make no proposal to shorten the
7 useful life or depreciation period (and investment value) of the LEAs while also
8 claiming the usefulness of the LEA beyond 25 years is essentially irrelevant beyond
9 the time horizon of its DCF analysis. The very purpose of aligning depreciable lives
10 with useful lives is to prevent scenarios exactly like this, wherein LEAs are
11 financed now with no regard for the people who will still be paying for them
12 decades into the future.

13

14 **Q. What expectations did the Commission set forth in Order 22-388 for the**
15 **Company to propose an alternative to the phase-down-from-\$2,300 LEA**
16 **established in the Order?**

17 A. In Order 22-388 the Commission stated:

18 If the company does request through a future filing that the Commission
19 modify its LEA... we will expect certain demonstrations in the proposal
20 to include:

21

- 22 - The company's best reasonable estimate of present and future CPP
23 compliance costs.
24 - An analysis of how each new customer addition changes the costs of
25 CPP compliance for other customers;
26 - An explanation of how the proposed LEA incorporates and recognizes
27 the costs of CPP compliance;

- 1 - An analysis supporting the company's assumptions about the expected
2 time frame over which new customers will remain on the system, and
3 how changing policy dynamics were factored in; and
4 - A demonstration of the expected year-by-year economic impact on
5 existing customers from the addition of new customers under the
6 proposed LEA, such that the "breakeven" year is shown, along with the
7 costs and benefits expected in other years, and a demonstration of when
8 rate-based investments for customer additions covered by the LEA are
9 depreciated and removed.⁶⁷

10
11
12 **Q. Does the Company convincingly demonstrate what the Commission requested**
13 **in Order 22-388?**

14 A. No, the Company's proposal falls short in several crucial regards.

15
16 **Q. Is the Company's "estimate of present and future CPP compliance costs"**
17 **reasonable?**

18 A. No. In Opening Testimony, CUB, Staff and the Coalition each argued that the
19 Company's proxy CPP Compliance costs were modeled unreasonably.⁶⁸ The
20 Company's response in Reply Testimony resulted in a small upward adjustment in
21 the price of decarbonized fuel from \$22/mmBTU to \$25/mmBTU.⁶⁹ This
22 adjustment fails to address several key concerns. The Commission requested an
23 estimate of "present and future" compliance costs, but the Company's modeling
24 assumed a flat compliance cost over a 23-year period and only drew upon the price
25 of RNG. RNG is supply-limited and hydrogen-based fuels will probably be required

⁶⁷ UG 435, *In the Matter of NORTHWEST NATURAL GAS COMPANY, dba NW NATURAL, Request for a General Rate Revision. Order No. 22-388* at 52, (Oct. 24, 2022) <https://apps.puc.state.or.us/orders/2022ords/22-388.pdf>.

⁶⁸ UG 490 - CUB/200 Garrett/Page 17; Staff/900 Dlouhy/Pages 38- 40; and Coalition/100 Cebulko/Pages 14 – 17.

⁶⁹UG 490 - NW Natural/4000 Therrien/Page 6.

1 to decarbonize new load over the 25-year time horizon of the Company's DCF
2 analysis.⁷⁰ The high uncertainty surrounding hydrogen-based fuels⁷¹ should not be
3 ignored in modeling and the future cost of CPP compliance should be expected to
4 rise through time.

5
6 Furthermore, even though the Company's proxy CPP compliance cost modeling
7 drew upon the recently invalidated CPP for inputs, the Company did not use the
8 cost of the CPP's carbon offset instrument (the Community Climate Investment
9 (CCI)) as an input.⁷² Instead, the Company used a lower value based on
10 Washington's decarbonization program, the Climate Commitment Act.⁷³ In
11 Opening Testimony, I challenged this assumption.⁷⁴ The Company assumes
12 essentially everything about the CPP will be the same for its replacement except for
13 this input and the Company provides no evidence that the Oregon DEQ intends to
14 establish a CPP-like program with a lower carbon offset cost.

15
16 Finally, I note that in addition to the cost challenges of decarbonization, there is a
17 real challenge to the physical ability to decarbonize while continuing to grow the
18 system. In 2023, NWN brought in enough RNG supply to offset 0.91% of its

⁷⁰ LC 79, *In the Matter of Northwest Natural Gas Company*, 2022 Integrated Resource Plan. (Sept. 23, 2022), <https://edocs.puc.state.or.us/efdocs/HAA/lc79haa174551.pdf>.

⁷¹ LC 79, *In the Matter of Northwest Natural Gas Company*, 2022 Integrated Resource Plan, Order No. 23-281 at 9. (Aug. 2, 2023), <https://apps.puc.state.or.us/orders/2023ords/23-281.pdf>.

⁷² UG 490 – NW Natural/2000, Kravitz-Therrien/17.

⁷³ UG 490 – NW Natural/2000, Kravitz-Therrien/17.

⁷⁴ UG 490 – CUB/200 Garrett/15.

1 load.⁷⁵ This is below the 5% target in the IRP target and SB 98⁷⁶ and raises
2 questions about the physical ability to supply alternative fuels in the quantities that
3 will be necessary to comply with the CPP and continue to grow the system.
4

5 **Q. Is the Company’s “analysis supporting [its] assumptions about the expected**
6 **time frame over which new customers will remain on the system, and how**
7 **changing policy dynamics were factored in” reasonable?**

8 A. The Company modeled 100% new customer retention over a 25-year period, which
9 is not reasonable. Unlike LEA modeling for other utilities, such as water and
10 electric utilities, which have virtually no risk of customers discontinuing service,
11 gas LEA modeling should consider whether the utility’s optional service will retain
12 new customers long enough to recoup LEA costs. The Company’s strategy of
13 targeting lower use new customers and charging them higher rates amidst
14 increasingly competitive alternatives and exceptional uncertainty over future fuel
15 costs, risks driving attrition of new customers within the 25-year time frame the
16 Company’s LEA model. This would result in costly stranded investments which I
17 modeled in Opening and Rebuttal Testimony and discuss above. In Reply
18 Testimony, the Company did not reduce the anticipated time frame over which new
19 customers will remain on its system or otherwise incorporate stranded asset costs
20 into its modeling.

⁷⁵ RG 99, 2023 Annual Renewable Natural Gas Compliance Report of Northwest Natural. (June 28, 2024), <https://edocs.puc.state.or.us/efdocs/HAQ/rg99haq329698054.pdf>

⁷⁶ LC 79, *In the Matter of Northwest Natural Gas Company, 2022 Integrated Resource Plan (Sept. 23, 2022), Executive Summary p. 30.*), <https://edocs.puc.state.or.us/efdocs/HAA/lc79haa174551.pdf>

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Q. Does the Company provide “a demonstration of when rate-based investments for customer additions covered by the LEA are depreciated and removed” that is reasonable?

A. No. The Company seems to conflate the period over which it models parity between new and existing customers in its DCF model (25 years) with the period over which assets within LEAs will remain undepreciated in rates (65 – 100 years or more⁷⁷) and in doing so mischaracterizes my Opening Testimony.⁷⁸ Paying off LEAs provided in 2025 will still burden customers in 2090, unless accelerated depreciation or another change occurs. If these new premise customers or the people that move into their home after them are no longer using the gas system, there will be stranded investment – investment that is not yet depreciated but is no longer used and useful. The Company refuses to acknowledge this simple fact.

Q. Does the Company’s proposed LEA policy fairly balance the interests of new and existing customers?

A. No. Each of the Company’s assumptions I challenged drive a higher LEA when applied in the Company’s modeling, and if the LEA cap is set too high, this suggests the policy will result in net harm to existing customers.

///

⁷⁷ See Exhibit CUB/406, Garrett – “Data Requests”, CUB DR to NWN 32.
⁷⁸ UG 490 – NW Natural/4000 Therrien/Pages 33 and 35.

1 **Q. Are there any other concerns over the Company's proposed LEA policy that**
2 **you wish to address before providing a recommendation?**

3 A. Yes, there are two.

4
5 **Q. What is the first concern?**

6 A. The Company's proposed LEA policy, which entails per-residential-customer LEA
7 caps based on customer attributes, including which appliances the new customer
8 has installed in their home and how many months of the year they expect to reside
9 in the residence, presents an unreasonable administrative burden to track that is
10 especially pertinent in light of the Company's recent LEA overspend.

11
12 As I discussed previously, the Company's former LEA policy set LEA caps
13 according to specific residential customer attributes. Tracking the Company's
14 adherence to its own LEA policy on a per-residential-customer basis presents a
15 substantial challenge, as doing so precisely requires individual assessments of
16 residential LEAs. This resulted in my having to assume all customers were eligible
17 for the highest possible LEA in my undepreciated LEA overspend analysis.

18 Tracking the Company's adherence to multi-tier proposed LEA policy presents an
19 unreasonable task that the Company's recent LEA practices suggest could be
20 required in the future. A single, fixed LEA cap for all residential customers that is
21 easier to track is more sensible for a policy that applies to thousands of customers.

22
23 *///*

1 **Q. What is your second concern?**

2 A. Raising the Company's LEA does not align with the largest rate driver in the
3 Company's rate increase filing, the \$62.4 million increase in depreciation expense.
4 The increase in depreciation expense can be broken down into the following two
5 categories: a \$28.1 million increase due to additions, transfers and retirements to
6 utility plant in service, and a \$34.3 million increase driven by findings from the
7 Company's depreciation study.⁷⁹ Within the \$34.3 million increase driven by
8 findings of the depreciation study, CUB is aware of two primary rate drivers: 1.
9 higher negative salvage values for retired assets and 2. shorter useful (aka service)
10 lives for distribution system assets.⁸⁰

11
12 **Q. What is the "useful life" of an asset?**

13 A. The useful life of an asset is essentially a prediction of how long an asset is
14 expected to be usable and used. The prediction is largely based on how long similar
15 assets lasted before wearing out in the past; however, useful life analyses are also
16 forward-looking and integrate anticipated obsolescence due to market
17 transformations when this potentiality is relevant. Adjusting the useful life of
18 analog meters to account for premature replacement (i.e. replacement before the
19 analog meter is expected to wear out) by digital meters serves as an important
20 example.

21

⁷⁹ See Exhibit CUB/406, Garrett – "Data Requests", NWN Response to CUB DR 18.

⁸⁰ UG 490 – NW Natural/1602, Spanos.

1 Shortening the useful lives of gas infrastructure assets reduces the Company's
2 overall profit because it instigates faster collection of the Company's distribution
3 system assets. However, this also drives an increase in near-term rates, like the one
4 proposed by the Company in this rate filing.

5

6 **Q. What is CUB's stance on shortening the useful lives for gas system**
7 **infrastructure?**

8 A. CUB is willing to carefully consider shorter useful lives for gas distribution system
9 assets and paying off the assets faster (i.e. accelerated depreciation) to avoid
10 burdening the last customers on the gas system with high expenses for
11 undepreciated assets meant to serve a larger customer base. However, it is very
12 important to note that this incurs a serious near-term trade-off, raising rates now,
13 that must be considered thoughtfully.

14

15 **Q. How are useful life determinations for assets used to determine rates and why**
16 **is it important that they are accurate?**

17 A. An asset's useful life is typically used to set an amortization period for paying off
18 the asset. This promotes fairness because it assigns incremental costs to the
19 customers that benefit from the asset. If the useful life for an asset is set too short,
20 the asset will be paid off before it is done providing service, overcharging early
21 customers and undercharging later customers, who continue benefitting from the
22 asset even after it is entirely paid off. If the useful life of an asset is set too long, and
23 the asset is rendered useless before it is paid off, and customers later on are

1 burdened with paying for an asset without benefitting from it (though I note that
2 there may be legal issues associated with charging customers for assets that are
3 retired).

4
5 **Q. Why is CUB willing to carefully consider shortening the useful lives of gas**
6 **distribution system infrastructure?**

7 A. CUB is concerned about the future usefulness of gas system infrastructure in a
8 decarbonizing sector. NW Natural, along with Avista and Cascade Natural Gas, do
9 not have Commission-approved long-term IRP plans. CUB is concerned that we
10 may see shrinking throughput and customer bases on gas LDCs in decades to come,
11 which, alongside the same or higher fixed costs for distribution systems built to
12 serve a larger customer bases, would cause significant upward pressure on rates.
13 This could result in harmful feedback, whereby customers leave the gas system due
14 to rising rates, fueling a spiraling cycle of more rate increases and customer
15 attrition. Hence, CUB sees reason in paying off gas system infrastructure sooner
16 rather than later as part of a no regrets approach, so that if the gas system customer
17 base shrinks in the decades to come, the last remaining customers won't be left with
18 high fixed costs for a gas system meant to serve a larger customer base.

19
20 Shortening the useful lives of assets, or accelerating depreciation, can benefit the
21 Company as well. Certain assets may lose their used and useful status if the
22 Company's customer base shrinks, and subsequently the Company may lose the
23 opportunity to fully collect on its investments. By collecting on these investments

1 sooner rather than later, the Company optimizes its opportunity to collect revenues
2 from a larger customer base that makes fuller use of its current assets.

3
4 **Q. If CUB is willing to consider carefully reducing the useful lives of distribution**
5 **system assets, and the Company’s depreciation expense proposal does this,**
6 **what is CUB’s concern?**

7 A. Shortening the useful life of gas system assets and accelerating depreciation raises
8 the depreciation expense and near-term rates. CUB does not take this lightly,
9 especially now, amidst high rate increases and ratepayer hardship. Put simply, CUB
10 recognizes that accelerating depreciation mitigates a serious future risk, but also
11 comes with serious trade-offs, and if we’re going to accelerate depreciation to
12 prevent future inequity, we should be broaching this issue holistically and fairly.

13
14 **Q. What is required to consider this issue “holistically and fairly” and how does it**
15 **relate to the Company’s LEA?**

16 A. The Company’s LEA proposal *increases* the allowance, which incents adding new
17 infrastructure with 65-year useful lives and increasing the likelihood of creating
18 stranded assets that future customers will bear the burden of deep into the future.
19 Approving the Company’s request for faster depreciation and a higher depreciation
20 expense now does not align with increasing the Company’s LEA proposal and
21 incenting additional growth and long-term expenses for the gas distribution system.

22
23 ///

1 **Q. What is your recommendation for the Company's LEA policy?**

2 A. I recommend the Commission reject the Company's LEA proposal because it did
3 not satisfactorily meet the demonstration requirements provided in Commission
4 Order 22-388. I recommend an LEA that phases down according to the mechanism
5 established in Order 22-388 (gradually decreasing multiples of the average
6 residential customer's margin revenue)⁸¹ until the Company's LEA is \$0. It would
7 result in an LEA that is 3x margin beginning in November 2024, 2x margin in
8 November 2025, 1x margin in November 2026, and \$0 by November 2027 and
9 thereafter. I recommend a reduction in rate base concomitant with an LEA in the
10 Test Year that is three times the average margin revenue of a residential customer. I
11 also recommend that the Commission direct the Company to adhere to the LEA cap
12 for *each* new customer and *every* LEA.

13
14 I recommend a phase-down rather than an immediate termination of the LEA policy
15 because as CUB stated previously in UG 435 and the Commission agreed, we are
16 concerned about the effect a sudden change in the policy would have on
17 homebuilders, homebuyers, and the Company, and feel a phase-down is a
18 reasonable compromise.⁸² This is consistent with the phase-down of Avista's LEA,
19 which CUB proposed in Opening Testimony of Avista's last rate case and the
20 Company accepted.⁸³

⁸¹ UG 435, *In the Matter of NORTHWEST NATURAL GAS COMPANY, dba NW NATURAL, Request for a General Rate Revision*. Order No. 22-388 at 51, (Oct. 24, 2022) <https://apps.puc.state.or.us/orders/2022ords/22-388.pdf>.

⁸² *Id.* at 49-50.

⁸³ UG 461, *In the Matter of AVISTA CORPORATION, dba AVISTA UTILITIES, Request for a General Rate Revision*. Order No. 23-384, (Oct. 26, 2023) <https://apps.puc.state.or.us/orders/2023ords/23-384.pdf>.

1 **IV. Opposition to the New Premises Residential Customer Class and its**
2 **\$26.25 Customer Charge**
3

4 **Q. Briefly summarize the Company’s proposal to bifurcate the residential class**
5 **and create a New Premises customer class.**

6 A. In its Initial Filing, NW Natural proposed a bifurcation of the residential customer
7 class whereby New Premises customers, i.e. customers with new gas connections
8 after November 1, 2024, are billed a \$26.25 Customer Charge as opposed to the \$10
9 Customer charge for existing customers. The Company justifies the class
10 bifurcation and different rate structures by arguing that an anticipated usage
11 disparity between future New Premises customers and its existing customers will
12 result in an intra-class inequity due to the design of its decoupling mechanism.

13
14 **Q. Briefly summarize your Opening Testimony.**

15 A. In Opening Testimony, I argued the Company’s proposal results in New Premises
16 customers paying significantly higher rates than other residential customers with
17 identical usage of the gas system, and that this is probably discriminatory. I argued
18 that the New Premises customer class targeted a broad subset of customers,
19 including many future customers in multi-family homes, who are likely not a just
20 target for sharp rate increases. I proposed the Commission reject the Company’s
21 proposal to bifurcate the residential customer class.

22
23 ///

24 ///

1 **Q. Briefly summarize the Company’s Reply.**

2 A. The Company refutes my analysis indicating a large rate disparity between New
3 Premises customers and other residential customers.⁸⁴ Company Witness Wyman
4 challenged the premise of the inter-class rates comparison analysis (residential class
5 and its proposed New Premises class) I provided in Opening Testimony, arguing
6 that a comparison between customers across classes with the same usage was
7 unsound.⁸⁵ The Company reasserts that the class bifurcation and higher customer
8 charge are justified by the phenomenon it observed in its decoupling mechanism.
9 Further, it describes New Premises customers as “more likely to be owners of
10 newly constructed single-family residences” in “higher-income Census Tracts”,
11 suggesting the \$26.25 New Premises customer charge will not beget undesirable
12 inequities.⁸⁶

13
14 **Q. Please respond to Witness Wyman’s critiques of your New Premises customer
15 rate disparity analysis.**

16 A. In Opening Testimony, I compared the annual rates of existing residential
17 customers and New Premises residential customers that have similar gas usage and
18 found that the rates for New Premises were significantly higher. I acknowledge an
19 error in the workpaper for this analysis (CUB/203, Garrett) due to an Excel formula
20 containing a single-letter error, which was identified by the Company in Reply

⁸⁴ UG 490 – NW Natural/3900 Wyman/Page 47.

⁸⁵ UG 490 – NW Natural/3900 Wyman/Pages 51 - 52.

⁸⁶ UG 490 – NW Natural/3900 Wyman/Page 52.

1 Testimony.⁸⁷ However, fixing the error does not eliminate the substantial disparity
2 between ordinary residential customers and New Premises residential customers
3 with the same usage of the Company's system.
4

5 A clear illustration of the surcharge for New Premises customers is as follows: two
6 residential customers use the same amount of gas over the course of a year. One is
7 an existing customer, and the other is a New Premises customer. Under the
8 Company's proposal, their volumetric billing rates are identical, but the customer
9 charge for the New Premises customer is \$16.25/month (163%) higher, which over
10 12 months amounts to a \$195 surcharge.⁸⁸ So, despite the two customers' identical
11 utilization of the gas system, the New Premises customer incurs a surcharge of
12 \$195/year. This equates to adding about two winter months to the typical New
13 Premises customers' annual gas bill.⁸⁹ This is not a subtle difference for two
14 residential customers with identical usage of the gas system.
15

16 It should be noted that the typical net impact of UG 490 on gas customers with new
17 connections is a 47.2% rate increase.⁹⁰ Put differently, customers with new
18 connections billed according to the company's proposed rates in UG 490 would pay
19 47.2% more than if they connected now and received UG 435 rates. Again, I note

⁸⁷ See *CUB's Errata Opening Testimony of John Garrett (CUB/200 Garrett/9; CUB/200 Garrett, pages 8-18; and CUB/203 Garrett/2)* (filed June 21, 2024).

⁸⁸ If the two customers used 449 therms, then the New Premises customer's annual rate would be 37% using the base rates NWN supplied in CUB DR 9 or 24.3% higher using the Company's forecasted "all-inclusive" total rate per-term. See UG 490 – NW Natural/3900 Wyman/Page 48.

⁸⁹ UG 490 – CUB/203, Garrett.

⁹⁰ UG 490 – CUB/405, Garrett.

1 that the Company’s rate increase proposal has substantial implications for New
2 Premises customers’ rates.

3
4 Company Witness Wyman argues that rate comparisons like mine between
5 customers with the same usage are unsound, because the “typical” New Premises
6 customer is expected to use less gas than the “typical” existing customer.⁹¹
7 However, many possible groupings within the residential customer class probably
8 exhibit an average usage that is distinct from the rest of the residential class, making
9 the Company’s targeting of New Premises customers arbitrary. Perhaps customers
10 living in studio apartments use less gas on average, meaning if they were grouped
11 together and examined through NW Natural’s decoupling mechanism, all customers
12 living in studio apartments would deserve a higher rate. Perhaps customers in the
13 Goose Hollow neighborhood of Portland use more gas on average for larger homes,
14 meaning if they were grouped together and examined through NW Natural’s
15 decoupling mechanism, all customers living in Goose Hollow would deserve a
16 lower rate. Ultimately, drawing lines around lower use customers and examining
17 them through the Company’s decoupling mechanism enables the Company to
18 charge lower use groups of customers higher rates arbitrarily, unless the new
19 grouping is truly justified.

20
21 ///

22 ///

⁹¹ UG 490 – NW Natural/3900 Wyman/Pages 51 - 52.

1 **Q. Is the difference in usage per customer between New Premises customers and**
2 **existing customers liable to change?**

3 A. It could. The Company's assessment of New Premises customers is based on just
4 five years of data. The observed difference between the typical use-per-customer of
5 New Premises customers and existing customers could easily diminish in time.

6 Perhaps recent housing comes with more efficient technologies, but new customers
7 just invested in this efficiency, and this does not preclude legacy customers in older
8 homes from investing in efficiency themselves and gradually closing the usage gap.

9 Through the ETO the Company and PGE, the electric utility whose service territory
10 envelopes most of NW Natural's, are spending millions of dollars on efficiency
11 measures for existing customers. Additionally, federal and state incentives for
12 building electrification and efficiency will reduce existing customer use.

13 Accordingly, existing customers' average usage should be expected to decrease in
14 time too, undermining the class bifurcation the Company is drawing up based on
15 just a few years of data today. Further, CUB advocates for efficiency programs
16 targeting lower-income and energy-burdened communities first, which offers a
17 more targeted means of assisting customers with high energy burden.

18 **Q. Is billing successively lower-use generations of customers higher rates**
19 **sustainable?**

20 No, the Company's proposal to charge the next generation of New Premises
21 customers higher rates for lower usage sets an unsustainable precedent. The
22 Company suggests its LEA policy will incent hybrid heating and proselytizes this
23 outcome in its responsible growth plan. Hybrid heating results in customers with

1 very low gas usage. Space heating is the Company’s primary residential load driver,
2 and the Company estimates a gas furnace in a new home draws 415 therms/year
3 from the gas distribution system, whereas a gas backup to a heat pump only draws
4 70 therms/year, which equates to an 83% reduction in space heating load for
5 NW Natural.⁹² A customer with hybrid heating and a gas cooking range would only
6 use 91 therms per year, which is 358 therms (or 80%) less than NW Natural models
7 the typical New Premises customer using (449 therms).⁹³

8
9 If the New Premises customer class is created now, in a few years will the
10 Company propose a new, New Premises customer class, with a dramatic surcharge
11 for customers with hybrid heating? If this continues, the Company will accrue
12 customers with less and less usage, which it will have to charge higher and higher
13 rates, presenting a substantial incentive for new customers to leave the Company’s
14 service after realizing the high cost and low utility of gas service, an issue I also
15 address in my LEA policy testimony above.

16
17 **Q. The Company describes the addition of New Premises customers as**
18 **“disproportionally impact[ing] higher use existing premises customers” unless**
19 **it implements its proposal to bifurcate the residential class and charge New**
20 **Premises customers a different rate — do you agree?**

21 A. No, in fact the opposite appears to be true: the Company’s proposal appears to have
22 an outsized effect on New Premises customers. Under the Company’s proposal,

⁹² See UG 490 – Exhibit CUB/205, Garrett.

⁹³ *Id.*

1 cohorts of New Premises customers (a few thousand a year) would each receive a
2 \$195/year surcharge to prevent a much smaller volumetric rate increase when
3 spread across the Company's hundreds of thousands of residential customers. When
4 viewed this way, the New Premises customers, who just made a substantial
5 investment in efficiency (a new home), are the ones facing an outsized rate increase
6 to prevent a much smaller rate increase for other residential customers.

7

8 **Q. Which Oregonians does the Company's New Premises customer surcharge**
9 **target?**

10 A. The policy targets future NW Natural customers which the Company characterizes
11 according to a five-year study of new customers from 2018 to 2023.⁹⁴ The
12 Company describes New Premises customers as:

13 on average, more likely to live in higher-income Census Tracts, are more
14 likely to be owners of newly constructed single-family residences and are
15 less likely to be enrolled in the Company's bill discount program
16 compared to existing premises customers."⁹⁵
17

18 **Q. Is the scope of the Company's study and subsequent characterization of New**
19 **Premises customers robust?**

20 A. The Company's study is not robust, and its characterization of New Premises
21 customers is misleading in several regards. First and foremost, the short period of
22 its study (2018-2023) on New Premises customers,⁹⁶ and the incredibly unique

⁹⁴ UG 490 – NW Natural/3900 Wyman/Page 42.

⁹⁵ UG 490 – NW Natural/2200, Kravitz/Page 27 – 28.

⁹⁶ UG 490 – NW Natural/3900 Wyman/Page 42.

1 COVID-era economic conditions within it, undermine its usefulness for predicting
2 the attributes of all future customers with new gas connections.

3

4 For instance, one assumption that resulted from the study that may not hold true
5 over time is that new housing for NW Natural’s new connections will be in
6 “higher-income Census Tracts.” According to Housing Oregon, one of the primary
7 challenges of the housing shortage is that “[t]oo much of the new housing is
8 “luxury” with rents or mortgages out of reach for most Oregonians, resulting in a
9 shortage of affordable housing.” If Oregon is to be successful in addressing the
10 housing shortage, we should expect an increase in more affordable housing, perhaps
11 in average- or lower-income Census Tracts.

12

13 Furthermore, the Company’s point that New Premises customers “are more likely to
14 be owners of newly constructed single-family residences” is not as telling as it
15 might seem. The Company’s current customer composition already reflects a
16 tendency for its gas customers to live in single-family homes and in fact, relative to
17 its current customer base, a higher portion of New Premises customers are expected
18 to live in multi-family homes.⁹⁷

19 ///

20 ///

21 ///

22 ///

⁹⁷ See CUB/400/Garrett,/55, Tables 5 and 6.

1 **Q. In Opening Testimony, you conducted an analysis on who the New Premises**
2 **rates would affect, focusing on single-family versus multi-family customers.**
3 **The results seem at odds with what the Company is saying about New**
4 **Premises rates predominantly affecting single-family customers. Please**
5 **explain.**

6 A. My analysis in Opening Testimony used information provided by the Company in
7 discovery. In CUB DR 9, I requested information on Test Year billing rates for
8 existing and New Premises customers and single-and multi-family customers. The
9 Company's response provided expected rates and customer counts for each kind of
10 residential customer.⁹⁸ Using this data, I found that relative to the Company's
11 current customer base, New Premises customers are more likely to be multi-family
12 customers.⁹⁹

13

14 In a footnote in Reply Testimony, the Company provides a correction to the data it
15 provided in CUB DR 9 that was previously unbeknownst to CUB and affects my
16 analysis. The old analysis is shown in Table 5 and a new analysis, with a corrected
17 input, is shown in Table 6. The values that changed are labelled with an asterisk.

18 ///

19 ///

20 ///

21 ///

22 ///

⁹⁸ NWN response to CUB DR 9.

⁹⁹ CUB/200/Garrett/10.

1 **Table 5. CUB's New Premises Customer Type Comparison From Opening**
2 **Testimony**

3

New Premise Customers			Existing Customers		
	Customers	Percentage		Customers	Percentage
New MF	1525	33%	Existing MF	73,221	11%
New SF	3081	67%	Existing SF	566945	88%
Total New Premise	4606		All Res Cust Count	643,247	

4

5 **Table 6. CUB's New Premises Customer Type Comparison with Updated Inputs**
6 **from NWN**

7

New Premise Customers			Existing Customers		
	Customers	Percentage		Customers	Percentage
New MF	1525	25%*	Existing MF	73,221	11%
New SF	4607*	75%*	Existing SF	566945	88%
Total New Premise	6132*		All Res Cust Count	643,247	

8

9 Correcting the Company's error reduces the discrepancy I observed in Opening
10 Testimony but does not eliminate it. Even after incorporating the Company's new,
11 corrected estimate for the Test Year multi-family New Premises customer count,
12 the analysis still shows that relative to the Company's current customer base, New
13 Premises customers are *more likely* to be multi-family customers. NW Natural
14 expects 25% of New Premises customers to live in multi-family housing, as
15 opposed to just 11% of its current customer base.

16

17 **Q. Why else might the Company propose to create a New Premises customer class**
18 **with a significantly higher rate?**

19 A. The New Premises customer class is needed to support the Company's proposed
20 LEA policy. Essentially, to justify spending more of existing customers' money to

1 connect more expensive new customers to its system, the Company needs to collect
2 more revenue from new customers with lower usage.

3
4 It should be noted that while new customers add decarbonization costs as per the
5 design of the CPP, the intent of the CPP was probably not to target newer utility
6 customers with higher decarbonization costs than older utility customers. The intent
7 of the declining cap was probably to gradually progress decarbonization goals
8 without targeting specific generations of utility customers, particularly if the newer
9 generations of utility customers invested in homes with higher efficiency.

10
11 **Q. What is your recommendation regarding the New Premises customer class?**

12 A. The Company's proposal to create a new rate class based on the date customers
13 connect to its system targets a loosely characterized cohort of future customers
14 unfairly. It is unclear who will be affected by the New Premises \$195/year
15 surcharge in the future and singling out these customers for higher rates, when
16 many conceivable customer cohorts probably use less gas than the average
17 residential customer—and arguably could receive higher rates when their usage is
18 examined through the Company's decoupling mechanism—is possibly
19 discriminatory. The proposal's primary purpose appears to be supporting the
20 Company's proposed LEA policy. Therefore, I recommend rejection of the
21 Company's proposal to bifurcate the residential customer class and create the New
22 Premises customer class.

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

2 A. Yes.

WITNESS QUALIFICATION STATEMENT

NAME: John Garrett

EMPLOYER: Oregon Citizens' Utility Board

TITLE: Utility Analyst

ADDRESS:

610 SW Broadway, Suite 400
Portland, OR 97205

EDUCATION:

Master of Public Policy,
Oregon State University,
Corvallis, OR

BA, Molecular Biology and Geography
Colgate University,
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EXPERIENCE: Provided testimony on behalf of the Oregon Citizens' Utility Board for dockets UG 461 (Avista GRC) and UM 1908 (Lumen Price Plan). Provided comments on behalf of the Oregon Citizens' Utility Board for LC 81, LC 83, UE 424, UM 2033 and UM 2056. Worked as a Graduate Researcher for Oregon State University examining the socio-economic impacts of renewable energy development in Oregon. Worked as a Research Assistant for the Archbold Biological Station Agro-ecology Research Ranch examining the socio-economic impacts of conservation polices on Floridian agriculturalists.

MEMBERSHIP: National Association of State Utility Consumer Advocates



Rates & Regulatory Affairs
UG 490
Request for a General Rate Revision
Data Request Response

Request No.: UG 490 CUB DR 53

53. Please provide a digital copy of NW Natural's Schedule X prior to changes made following UG 435 (ie Schedule X before November 1, 2022) and any other versions of Schedule X that were in effect from Jan 2018 to present. Please indicate when each version of Schedule X went into effect.

Response:

Please see the following attachments:

UG 490 CUB DR 53 Attachment 1: Schedule X in effect prior to November 1, 2022.

- Sheets X-1, X-2, X-6, X-7 and X-8 became effective on November 1, 2012, and are still in effect.
- Sheets X-3 and X-4 became effective November 26, 2014, and are still in effect.
- Sheet X-5 became effective on November 1, 2012, and inactive on October 31, 2022.

UG 490 CUB DR 53 Attachment 2: Sheet X-5 became effective November 1, 2022, and is still in effect.

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Original Sheet X-1

SCHEDULE X DISTRIBUTION FACILITIES EXTENSIONS FOR APPLICANT-REQUESTED SERVICES AND MAINS

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AVAILABLE:

In all territory served by the Company under the Tariff of which this Schedule is a part.

APPLICABLE:

The terms and provisions of this Schedule apply to the installation of Distribution Facilities required to provide utility service to a bona fide Applicant, or to a builder or developer ("Builder/Developer") of real property where gas-fired equipment is committed to be installed and used in a residential dwelling(s), commercial building(s), or industrial plant(s) that is located or to be constructed on such property. Except where specifically stated otherwise, the use of the term Applicant shall be construed to include a Builder/Developer. This Schedule does not apply to Company initiated system improvements or expansions of its Distribution System.

GENERAL CONDITIONS OF SERVICE:

The installation of Distribution Facilities under this Schedule will be completed as soon as reasonably possible following the receipt and approval of a service application. Requests for service to Non-Residential Applicants and to any new construction planned development will require sufficient advance notice to allow for design, permits, and any other special requirements necessary to provide the requested utility service.

The Company may accept requests for service received through an equipment installer or other third party on behalf of an Applicant provided that the Applicant information is included with the service request. Any Construction Contribution paid to the Company by an equipment installer or other third party on behalf of an Applicant will be considered paid by Applicant, and any subsequent refunds of such Construction Contribution shall go to the Applicant.

Prior to the installation of any Distribution Facilities, the Company may require that an Applicant sign a Service Agreement as described in the "SERVICE AGREEMENT" provision of this Schedule.

A request for utility service on a temporary basis is subject to the terms and conditions set forth in Rule 22.

During the period September 1 through January 31, Residential and Commercial Applicants may request a priority installation schedule, subject to the priority installation schedule charge set forth in Schedule C. When the Company agrees to a priority installation schedule, the Company will expedite the service installation date for completion within five (5) working days from the date that the application of service is approved by the Company. The Company may deny a request for a priority installation if the quality or timing of the installation of other Applicants or Customers would be adversely affected.

(continue to Sheet X-2)

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**SCHEDULE X
DISTRIBUTION FACILITIES EXTENSIONS
FOR APPLICANT-REQUESTED SERVICES AND MAINS
(continued)**

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GENERAL CONDITIONS OF SERVICE (continued):

All Applicants must meet the credit criteria set forth in **Rule 2** before construction and activation of any Distribution Facilities, and Applicant must agree to take and pay for service in accordance with all applicable Schedules, General Rules and Regulations of this Tariff, and in accordance with the provisions and conditions of the Rate Schedule under which service will be provided by the Company.

Each Applicant is responsible for the installation and maintenance of all gas-fired appliances and House Line. All installations must conform with applicable laws, codes, and ordinances of all governmental authorities having jurisdiction. See **Rule 18** for additional information. Each Builder/Developer must also comply with the terms and conditions set forth in the "REQUIREMENTS FOR NEW CONSTRUCTION AND PLANNED DEVELOPMENTS" provision of this Schedule.

An Applicant must install and use the equipment associated with the Construction Allowance afforded to the Applicant within ninety (90) days from the date that the meter is installed at the site, or by such other date specifically agreed to by the Company. Failure to comply with this provision shall be cause for the Company to demand payment from the initial Applicant in the amount of the actual construction costs, less any Construction Contribution paid. If the actual equipment installed warrants a different Construction Allowance then the Construction Contribution will be recalculated. Any overpayment of \$75 or less will be credited to the Customer's gas utility account. A refund check will be issued for any overpayment in excess of \$75. If the recalculation results in a shortfall, the amount of the shortfall shall be immediately due and payable to the Company. Failure to pay such amount is cause for Disconnection of Service or for refusal of service under **Rule 1** and **Rule 11** of this Tariff.

LOCATION OF FACILITIES:

The Company reserves the right to designate the location of all Distribution Facilities required to serve an Applicant. In this designation, the Company will consider the distance along the shortest most practical, available and acceptable route that is clear of obstructions from the Main to the meter location.

All installations shall be made in accordance with **Rule 20** of this Tariff, and with the Company's Standard Practices and Procedures.

(continue to Sheet X-3)

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First Revision of Sheet X-3
Cancels Original Sheet X-3

SCHEDULE X DISTRIBUTION FACILITIES EXTENSIONS FOR APPLICANT-REQUESTED SERVICES AND MAINS (continued)

CONSTRUCTION COSTS:

Construction costs include all costs associated with the extension of the Company's Distribution Facilities. All costs applicable to this Schedule will be reviewed annually and updated as needed.

Construction costs for Service Line installations are based upon the Company's historical system average costs, except the Company may use a site-specific cost estimate if extraordinary construction conditions exist at the site. For purposes of this provision, extraordinary construction conditions include, but are not necessarily limited to:

- a) Extreme rocky conditions along the main or Service Line route.
- b) The connection must be made from a high pressure main.
- c) The Service Line is more than 700 feet in length.
- d) The installation requires a railroad, bridge, or other non-standard crossing permit.

In all cases, Main Extension costs will be based upon a site-specific cost estimate.

Where there is more than one Applicant for an installation that includes a Main Extension, the costs will be distributed equally among each of the Applicants, or in such other manner determined by the Applicants.

REQUIREMENTS FOR NEW CONSTRUCTION AND PLANNED DEVELOPMENT INSTALLATIONS:

This provision is applicable to any new construction installation or planned development project where the installation of Class B (less than or equal to 60 psig) Main is required, and where there are no existing buildings, roads, or other hard surfaces along the construction route.

For purposes of this provision, planned developments include but are not limited to, residential single-family subdivisions, residential multi-family developments, mixed-use developments, commercial and industrial parks, and any other similar project.

Except as otherwise provided in this provision, the Applicant must provide an open utility pathway for all Main located within the permitted area, and must install conduit in the utility pathway for all Service Line installations within the permitted area. The pathway and conduit must be installed in accordance with all applicable Company procedures, standards, and practices. The Company's installation requirements and installation procedures are available on the Company's website.

The Company will provide:

- (a) Any necessary Main installations in existing public rights-of-way and outside of the permitted project area;
- (b) Conduit for crossings; and
- (c) If there are no other proposed utility crossings, tie-in installation for gas-only road crossings in existing public rights-of-way outside of the permitted area.

(continue to Sheet X-4)

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First Revision of Sheet X-4
Cancels Original Sheet X-4

**SCHEDULE X
DISTRIBUTION FACILITIES EXTENSIONS
FOR APPLICANT-REQUESTED SERVICES AND MAINS
(continued)**

**REQUIREMENTS FOR NEW CONSTRUCTION AND PLANNED DEVELOPMENT
INSTALLATIONS (continued):**

The following installation schedule guidelines will apply:

	MAIN*	SERVICE(S)
Applicant Notification to Company	<u>No less than 7 Business Days</u> prior to start of pathway excavation	On the date that the conduit is installed
Company Installs Pipe	<u>No more than 7 Business Days</u> after confirmation that pathway is ready	<u>No more than 7 Business Days</u> from the date of notice that the conduit is installed
Estimated time from Notice to Installation	<u>No less than 14 Business Days</u> from Notice to Company	<u>No more than 7 Business Days</u> from the date of notice that the conduit is installed

* Within the permitted area

Exceptions may be accommodated where extenuating circumstances arise. In such event, the Company and the Applicant will develop a mutually acceptable modified installation schedule.

For Main installations, an Applicant must promptly notify the Company of any known delays in the scheduled installation date. If the Company does not receive notice of a construction delay prior to dispatching a crew to the site, the wasted trip fee specified in **Schedule C** will apply.

In the event the Company fails to meet a scheduled Main installation date through no fault of the Applicant, the Applicant is not obligated to hold the utility pathway open, and the Company will be responsible for all costs associated with re-opening the utility pathway or constructing a new utility pathway (whichever shall apply).

The Company will construct the utility pathway for an Applicant, at the Applicant's expense, under the following circumstances:

1. When the Company determines that an Applicant-provided pathway is not required.
2. When, prior to commencement of construction, the Applicant requests that the Company provide the pathway. All costs associated with construction of the pathway must be received by the Company prior to commencement of construction.
3. When, after commencement of construction, for whatever reason, the Applicant is unable to provide the pathway and Applicant requests that the Company perform the work.

The Company will charge an Applicant to construct the utility pathway under conditions 2 and 3 above. The costs associated with the Company's construction of the utility pathway under this provision are incremental and separate from any other construction costs applicable to the installation, and must be paid in full to the Company prior to construction.

(continue to Sheet X-5)

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**SCHEDULE X
DISTRIBUTION FACILITIES EXTENSIONS
FOR APPLICANT-REQUESTED SERVICES AND MAINS
(continued)**

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**REQUIREMENTS FOR NEW CONSTRUCTION AND PLANNED DEVELOPMENT INSTALLATIONS
(continued):**

The installation schedule for a Company provided utility pathway will be determined between the Company and the Applicant. If the Company fails to meet the agreed installation schedule, the Company will pay to the Applicant the service guarantee credit specified in **Schedule C**.

CONSTRUCTION ALLOWANCE:

The Construction Allowance is based upon the Customer classification. The customer classifications are:

- (1) Residential (Single-Family or Multi-Family Dwellings), and
- (2) Non-Residential (Commercial and Industrial) and Planned Developments.

An Applicant is subject to the conditions set forth in the "GENERAL CONDITIONS OF SERVICE" provision of this Schedule if the Applicant fails to install the equipment associated with the Construction Allowance afforded to the Applicant under this Schedule.

The Construction Allowances for each Customer classification follow:

Residential

The Construction Allowance per residential dwelling is based upon the gas-fired appliances to be installed, as set forth in the table below:

Category	Description	Notes	Construction Allowance (per Premise)
A	Primary Natural Gas space heating (does not apply to centralized space heating that serves multiple units)	1	\$2,875
B	Primary Natural Gas water heat (does not apply to centralized water heating that serves multiple units) Natural Gas heating fireplace for primary space heating Natural Gas wall heat for primary space heating	2	\$2,100
C	Range, Cook top, Clothes dryer	3	\$ 850
D	Gas barbecue, log lighter, gas log, tiki torch, Bunsen burner, pool, spa, or hot tub water heaters, standby space heating equipment including but not limited to natural gas back-up to electric heat pumps; non-primary space or water heat equipment; equipment installed in a detached garage, shop, or outbuilding	4	\$0

- [1] Alone or in combination with any additional Category A-D gas-fired appliances.
- [2] Alone or in combination with any additional Category B-D gas-fired appliances.
- [3] Alone or in combination with any additional Category C-D gas-fired appliances.
- [4] Alone or in combination with any additional Category D gas-fired appliances.

(continue to Sheet X-6)

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**SCHEDULE X
DISTRIBUTION FACILITIES EXTENSIONS
FOR APPLICANT-REQUESTED SERVICES AND MAINS
(continued)**

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CONSTRUCTION ALLOWANCE (continued):

The Construction Allowances shown above will apply to individually metered multi-family units. When a multi-family installation includes centralized gas-fired space or water heating equipment, or where the use of gas-fired equipment will be in place for laundry facilities, swimming pools, spas, or common building spaces, then the Non-Residential Construction Allowance will apply. In certain circumstances, both the Residential and Non-Residential Construction Allowances may apply to a multi-family Applicant.

Non-Residential and Planned Developments

The Company will perform an investment analysis for each installation to determine the amount of any Construction Allowance. At a minimum, the Construction Allowance will equal 5.0 times the annual margin revenue that is estimated to be generated from the operation of natural gas-fired equipment to be installed at the service address.

The Company will estimate therm usage associated with the operation of gas-fired equipment based on structure characteristics, the type and frequency of use of the gas-fired equipment, and the nameplate rating of the gas-fired equipment to be installed.

CONSTRUCTION CONTRIBUTION:

If the Construction Allowance applicable to an Applicant is less than the construction cost, then a Construction Contribution will be required.

The Company will not schedule any installation until the required Construction Contribution is paid. Each Construction Contribution payment will be adjusted for the applicable tax amount then in effect. The tax amount may change from time to time without prior notice.

Where a site-specific cost estimate was used to determine an Applicant's Construction Contribution, actual construction costs for such installation will be reviewed by the Company as soon as all costs have been accounted for. If actual construction costs are less than the site-specific cost estimate, then a refund of the cost difference will be issued to the Applicant. Any such refund is subject to the terms and conditions set forth in **Rule 11** and **Rule 16**.

(continue to Sheet X-7)

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**SCHEDULE X
DISTRIBUTION FACILITIES EXTENSIONS
FOR APPLICANT-REQUESTED SERVICES AND MAINS
(continued)**

SERVICE AGREEMENTS:

A Service Agreement may be required, at the sole discretion of the Company, in the following circumstances:

1. Whenever a Main Extension is required.
2. For service to Planned Developments.
3. When the cost of construction is greater than \$50,000.
4. When the Company's investment analysis requires a guarantee of margin revenue as a condition of the investment.

REFUNDS OF CONSTRUCTION CONTRIBUTIONS:

When the installation requires a Main Extension, any Construction Contribution paid may be subject to refund. A refund opportunity exists only when a new Service Line installation is added along the Main Extension within thirty-six (36) months from the date that the Main Extension was installed.

The Company will review Main Extension activity at the end of the thirty-six (36) month period to determine whether a refund of a Construction Contribution is due. The Company will perform a refund calculation prior to the end of the refund period upon specific request from the original contributor.

To determine the amount available for refund, the construction cost and the Construction Allowance will be updated. The construction cost will equal the actual construction cost of the original installation plus the cost of the subsequent connection. The Construction Allowance will equal the original Construction Allowance plus the Construction Allowance afforded the subsequent Applicant. If the resulting Construction Contribution is less than the Construction Contribution paid by the original contributor, then a refund equal to such difference will be issued to the original contributor. Example Calculation for a single original contributor:

Cost	Allowance	Contribution	Description
\$ 6,900			Cost of original Main Extension with 1 Service Line
	\$ 2,875		Less Original Construction Allowance
		\$ 4,025	Original Construction Contribution Paid
\$ 2,042			Add cost of new connection to Main Extension
\$ 8,942			Updated cost of Main Extension and 2 Service Lines
	\$ 5,750		Less Construction Allowance on 2 Service Lines
	\$ 3,192		Revised Construction Allowance (updated cost less updated Construction Allowance)
		\$ 833	Refund to Original Contributor (original contribution less updated Construction Allowance)

In no event will a refund exceed the amount of the original Construction Contribution.

(continue to Sheet X-8)

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**SCHEDULE X
DISTRIBUTION FACILITIES EXTENSIONS
FOR APPLICANT-REQUESTED SERVICES AND MAINS
(continued)**

REFUNDS OF CONSTRUCTION CONTRIBUTIONS (continued):

All refunds are calculated on the Construction Contribution amount before the income tax effects are applied.

Any Construction Contribution amounts not refunded by the end of the 36-month period will be retained by the Company.

SPECIAL CONDITIONS FOR INSTALLATIONS COMPLETED PRIOR TO NOVEMBER 1, 2012

For Service Line installations completed on or before November 1, 2012, the terms and conditions for refunds of Construction Contributions under Schedule X of P.U.C. Or. 24 shall continue to apply until the end of the 3rd Year following the Service Line installation date.

GENERAL TERMS:

Service under this Schedule is governed by the terms of this Schedule, the General Rules and Regulations contained in this Tariff, any other schedules that by their terms or by the terms of this Schedule apply to service under this Schedule, and by all rules and regulations prescribed by regulatory authorities, as amended from time to time.

Issued October 31, 2012
NWN OPUC Advice No. 12-17

Effective with service on
and after November 1, 2012

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NORTHWEST NATURAL GAS COMPANY
P.U.C. Or. 25

First Revision of Sheet X-5
Cancels Original Sheet X-5

**SCHEDULE X
DISTRIBUTION FACILITIES EXTENSIONS
FOR APPLICANT-REQUESTED SERVICES AND MAINS
(continued)**

**REQUIREMENTS FOR NEW CONSTRUCTION AND PLANNED DEVELOPMENT INSTALLATIONS
(continued):**

The installation schedule for a Company provided utility pathway will be determined between the Company and the Applicant. If the Company fails to meet the agreed installation schedule, the Company will pay to the Applicant the service guarantee credit specified in **Schedule C**.

CONSTRUCTION ALLOWANCE:

The Construction Allowance is based upon the Customer classification. The customer classifications are:

- (1) Residential (Single-Family or Multi-Family Dwellings), and
- (2) Non-Residential (Commercial and Industrial) and Planned Developments.

An Applicant is subject to the conditions set forth in the "GENERAL CONDITIONS OF SERVICE" provision of this Schedule if the Applicant fails to install the equipment associated with the Construction Allowance afforded to the Applicant under this Schedule.

The Construction Allowances for each Customer classification follow:

Residential

The Construction Allowance per residential dwelling will be equal to the factor shown below times the annual margin using the Base Rate and Base Adjustment from the applicable Rate Schedule times the annual estimated therm usage attributable to the Applicant's particular installation. For example, on November 2, 2022, the construction allowance for an Applicant expected to use 531 therms annually would be \$2,300. The Calculation of the estimated therm usage assumes usage in a permanent structure occupied 12 months per year and may be adjusted where service is requested where occupancy is known or expected to be less than 12 months per year. The estimated therm usage is determined from structure characteristics, demographics, heating degree days and type and number of appliances to be installed.

Effective Period	Margin Factor
November 1, 2022 – October 31, 2023	5 times
November 1, 2023 – October 31, 2024	4 times
November 1, 2024	3 times

(C)

(C)

(continue to Sheet X-6)

Issued October 26, 2022
NWN OPUC Advice No. 22-18

Effective with service on
and after November 1, 2022

Data sources: OPUC DR 138 Attachment 1 Amended and Coalition/Cebulko, 100

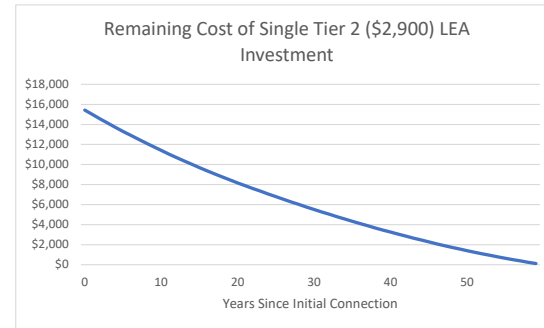
TABLE 1: NW Natural Residential Line Extension Allowances (LEA) 2018 - 2023							
Year	Line Extension Count	Line Extension Costs	New Customer Contributions	LEA	Highest Individual LEA	LEA Overspend	Undepreciated LEA Overspend
2018	7,789	\$15,497,889	\$479,836	\$15,018,054	\$26,619	\$1,852,540	\$1,278,701
2019	7,642	\$15,889,079	\$482,120	\$15,406,959	\$58,753	\$2,351,674	\$1,769,953
2020	7,034	\$15,748,394	\$782,478	\$14,965,917	\$59,834	\$2,971,590	\$2,445,685
2021	6,992	\$17,179,159	\$884,886	\$16,294,273	\$86,553	\$3,715,064	\$3,270,848
2022	6,284	\$14,690,559	\$902,424	\$13,788,135	\$71,677	\$3,118,937	\$2,857,245
2023	4,395	\$10,419,973	\$1,267,428	\$9,152,545	\$30,268	\$2,222,531	\$2,119,439
Total	40,136	\$89,425,053	\$4,799,171	\$84,625,882		\$16,232,335	\$13,741,872
Annual Average	6,689	\$14,904,176	\$799,862	\$14,104,314		\$2,705,389	
				LEA Overspend as Percentage of Company LEA Spending	19.18%		
				Percentage of LEAs with Overspend	18.93%		

Due to the large volume of information, a portion of CUB/403 has been included as a zip file titled: 'UG 490_CUB_Exhibit 403.7z' and can be found attached to the end of this testimony.

Table 2: Assorted Information on Residential LEA Overspend Since 2018

Total LEA Spending	\$84,625,882
LEA Count	40,136
Total LEA Overspend	\$16,232,335
Total Undepreciated LEA Overspend	\$13,741,872
LEA Overspend as Percentage of Company LEA Spending	19.2%
Portion of all LEAs with Overspend	18.9%
Total Incidences of Overspend	7599
Average Overspend	\$2,136
Count of LEAs Over \$10,000	345
Highest LEA	\$86,553
Total Incidences of Customer Contribution	4149
Average Customer Contribution	\$1,157

Years Since Connection	Remaining Cost of LEA
0	\$15,431
1	\$14,989
2	\$14,556
3	\$14,133
4	\$13,718
5	\$13,313
6	\$12,916
7	\$12,527
8	\$12,146
9	\$11,772
10	\$11,406
11	\$11,048
12	\$10,698
13	\$10,355
14	\$10,019
15	\$9,692
16	\$9,371
17	\$9,059
18	\$8,754
19	\$8,457
20	\$8,167
21	\$7,884
22	\$7,606
23	\$7,331
24	\$7,060
25	\$6,793
26	\$6,529
27	\$6,270
28	\$6,014
29	\$5,763
30	\$5,515
31	\$5,270
32	\$5,030
33	\$4,794
34	\$4,562
35	\$4,333
36	\$4,109
37	\$3,888
38	\$3,672
39	\$3,460
40	\$3,252
41	\$3,048
42	\$2,848
43	\$2,653
44	\$2,461
45	\$2,274
46	\$2,091
47	\$1,913
48	\$1,739
49	\$1,569
50	\$1,404
51	\$1,243
52	\$1,087
53	\$935
54	\$787
55	\$645
56	\$506
57	\$373
58	\$244
59	\$120



LEA Cost: 2900	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Year 11	Year 12	Year 13	Year 14	Year 15	Year 16	Year 17	Year 18	Year 19	Year 20	Year 21	Year 22	Year 23	Year 24	Year 25	Year 26	Year 27	Year 28	Year 29	Year 30
Total Cost of Service	\$ 442	\$ 433	\$ 424	\$ 414	\$ 405	\$ 397	\$ 389	\$ 381	\$ 373	\$ 366	\$ 358	\$ 351	\$ 343	\$ 335	\$ 328	\$ 320	\$ 312	\$ 305	\$ 297	\$ 290	\$ 283	\$ 279	\$ 275	\$ 271	\$ 267	\$ 263	\$ 259	\$ 256	\$ 252	\$ 248
Total Cost of Asset Over 25 Years	\$ 8,632																													
Total Cost of Asset Over Asset Life	\$ 15,431																													
Remaining Cost of Asset by Year	\$ -	\$ 14,989	\$ 14,556	\$ 14,133	\$ 13,718	\$ 13,313	\$ 12,916	\$ 12,527	\$ 12,146	\$ 11,772	\$ 11,406	\$ 11,048	\$ 10,698	\$ 10,355	\$ 10,019	\$ 9,692	\$ 9,371	\$ 9,059	\$ 8,754	\$ 8,457	\$ 8,167	\$ 7,884	\$ 7,606	\$ 7,331	\$ 7,060	\$ 6,793	\$ 6,529	\$ 6,270	\$ 6,014	\$ 5,763

Year	Year 31	Year 32	Year 33	Year 34	Year 35	Year 36	Year 37	Year 38	Year 39	Year 40	Year 41	Year 42	Year 43	Year 44	Year 45	Year 46	Year 47	Year 48	Year 49	Year 50	Year 51	Year 52	Year 53	Year 54	Year 55	Year 56	Year 57	Year 58	Year 59	Year 60
Total Cost of Service	\$ 244	\$ 240	\$ 236	\$ 232	\$ 228	\$ 224	\$ 220	\$ 216	\$ 212	\$ 208	\$ 204	\$ 200	\$ 196	\$ 191	\$ 187	\$ 183	\$ 178	\$ 174	\$ 170	\$ 165	\$ 161	\$ 156	\$ 152	\$ 147	\$ 143	\$ 138	\$ 134	\$ 129	\$ 124	\$ 120
Remaining Cost of Asset by Year	\$ 5,515	\$ 5,270	\$ 5,030	\$ 4,794	\$ 4,562	\$ 4,333	\$ 4,109	\$ 3,888	\$ 3,672	\$ 3,460	\$ 3,252	\$ 3,048	\$ 2,848	\$ 2,653	\$ 2,461	\$ 2,274	\$ 2,091	\$ 1,913	\$ 1,739	\$ 1,569	\$ 1,404	\$ 1,243	\$ 1,087	\$ 935	\$ 787	\$ 645	\$ 506	\$ 373	\$ 244	\$ 120

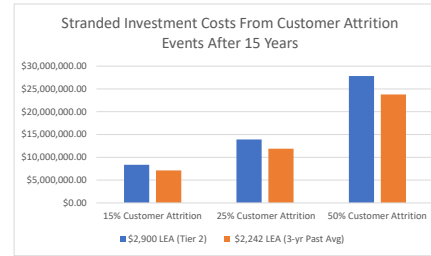
New Residential Hookups per Year: 5556
Annual Attrition: 1%

# Customers	Year cust leaves									
	1	2	3	4	5	6	7	8	9	10
Years After LEA Initial Investment	2	56	56	56	56	56	56	56	56	56
	3	55	55	55	55	55	55	55	55	55
	4		54	54	54	54	54	54	54	54
	5			54	54	54	54	54	54	54
	6				53	53	53	53	53	53
	7					53	53	53	53	53
	8						52	52	52	52
	9							52	52	52
	10								51	51
	11									51
LEAs Investment Stranded Annually		56	111	165	219	272	325	377	429	481
Total LEAs Stranded										2966

Years After LEA Initial Investment	Year cust leaves									
	1	2	3	4	5	6	7	8	9	10
2	\$ 832,856.29	\$ 832,856.29	\$ 832,856.29	\$ 832,856.29	\$ 832,856.29	\$ 832,856.29	\$ 832,856.29	\$ 832,856.29	\$ 832,856.29	\$ 832,856.29
3	\$ 800,697.25	\$ 800,697.25	\$ 800,697.25	\$ 800,697.25	\$ 800,697.25	\$ 800,697.25	\$ 800,697.25	\$ 800,697.25	\$ 800,697.25	\$ 800,697.25
4		\$ 769,624.96	\$ 769,624.96	\$ 769,624.96	\$ 769,624.96	\$ 769,624.96	\$ 769,624.96	\$ 769,624.96	\$ 769,624.96	\$ 769,624.96
5			\$ 739,592.06	\$ 739,592.06	\$ 739,592.06	\$ 739,592.06	\$ 739,592.06	\$ 739,592.06	\$ 739,592.06	\$ 739,592.06
6				\$ 710,564.25	\$ 710,564.25	\$ 710,564.25	\$ 710,564.25	\$ 710,564.25	\$ 710,564.25	\$ 710,564.25
7					\$ 682,470.11	\$ 682,470.11	\$ 682,470.11	\$ 682,470.11	\$ 682,470.11	\$ 682,470.11
8						\$ 655,300.88	\$ 655,300.88	\$ 655,300.88	\$ 655,300.88	\$ 655,300.88
9							\$ 629,010.22	\$ 629,010.22	\$ 629,010.22	\$ 629,010.22
10								\$ 603,571.86	\$ 603,571.86	\$ 603,571.86
11									\$ 578,966.51	\$ 578,966.51
Annual Stranded Asset Sum	\$ 832,856.29	\$ 1,633,553.54	\$ 2,403,178.50	\$ 3,142,770.56	\$ 3,853,324.81	\$ 4,535,794.92	\$ 5,191,095.81	\$ 5,820,106.03	\$ 6,423,677.89	\$ 7,002,644.40
Total Cost of Stranded Assets										\$ 40,839,002.76

LEA	LEA Initial Cost	Total Cost of LEA	Remaining Cost After 15 Years Per LEA	Net Value of Stranded LEAs (25% Attrition)	Net Value of Stranded LEAs (50% Attrition)	Net Value of Stranded LEAs (75% Attrition)
\$2,900 (Tier 2)	\$2,900	\$15,431	\$10,019	\$13,917,621	\$27,835,242	\$41,752,863
\$2,242 (Past 3-yr Avg Res LEA)	\$2,242	\$13,007	\$8,563	\$11,894,721	\$23,789,441	\$35,684,162

	Net Value of Stranded LEAs		
	15% Customer Attrition	25% Customer Attrition	50% Customer Attrition
\$2,900 LEA (Tier 2)	\$8,350,572.61	\$13,917,621	\$27,835,242
\$2,242 LEA (3-yr Past Avg)	\$7,136,832.35	\$11,894,721	\$23,789,441



Source: UG 490 Coalition (Earthjustice) DR 59

Residential

Year	# hookups/ yr	LEA/service
2021	6970	2324.25
2022	6248	2193.18
2023	3451	2209.61
3- Yr Avg	5556	\$2,242

New Premises Customers

	UG 435	UG 490
Customer Charge	\$8.00	\$26.25
Total per therm rate	\$1.29519	\$1.51976
Usage (annual therms)	449	449
Annual Bill	\$677.54	\$997.37
Change in rate (%)		47.2%



Rates & Regulatory Affairs
UG 490
Request for a General Rate Revision
Data Request Response

Request No.: UG 490 CUB DR 18

On NW Natural/100/Palfreyman-Kravitz/Page 20 the Company states that “Applying the depreciation rates from the depreciation study to Test Year plant balances results in an increase to depreciation expense of \$62.4 million.” From the UG 490 Workshop on March 7, 2024, it is CUB’s understanding that several factors contributed to the increase in depreciation expense, including new additions to rate base and changes to depreciation rates for existing assets based on the Company’s depreciation study.

Please provide:

- a. The gross increase to depreciation expense due to new additions to rate base in the 2024 Test Year.
- b. The gross reduction to depreciation expense due to the depreciation of assets between UG 435 and the 2024 Test Year.
- c. The increase in depreciation expense attributable to changes made in accordance with NW Natural’s most recent depreciation study.
 - i. Please also break down this increase in depreciation expense into the following two categories, and any additional major categories that fall outside them: 1. changing amortization periods to match NW Natural’s new depreciation study and 2. changing the negative salvage value of assets.

Response:

- a. The Company is able to isolate the impact into two buckets: (1) the depreciation study and (2) everything else. “Everything else” includes additions to plant, transfers, and retirements. The net depreciation expense increase due to additions, transfers and retirements to utility plant in service was \$28.1 million since the last rate case (UG 435).
- b. The Company is unclear what the data request initiator was referring to as “gross reduction”. The depreciation expense had an increase from UG 435 to the Test Year of \$62.4 million. The accumulated depreciation driven by additions, transfers and retirements (not the depreciation study) was an increase of \$161.8 million.

- c. The total depreciation expense driven by the study is \$34.3 million. The second component of subpart “c” is too vague to complete. The Company asks the initiator to ask a clarifying follow up data request.



Rates & Regulatory Affairs
UG 490
Request for a General Rate Revision
Data Request Response

Request No.: UG 490 CUB DR 32

For residential gas hookups in the Test Year, what are the useful lives of each of the gas infrastructure components of the hookup (such as ¼ inch pipe, a meter, etc.)?

Response:

The term 'useful life' may have different meanings depending on the context: the first being depreciable life, and the other being service life.

Depreciable life for a utility uses the average life, whereas service life is associated with the expected life that an asset will remain used and useful to benefit a customer. Average life does not always equal service life and it relates to all assets in one property account.

The Company's average life for a service line is 65 years; the average life for a meter is 14, 16, or 30 years, depending on the type of meter installed.

For medium density polyethylene (MDPE) service pipe material, material testing has shown that the useful life of the MDPE pipe is estimated to be 500 to 600 years or longer. For buried coated carbon steel service pipe material that is cathodically protected and used at typical distribution pressures, the useful life of the pipe is expected to be greater than 100 years. For above ground carbon steel service pipe that's coated or painted to protect against atmospheric corrosion the useful life of the pipe is expected to be greater than 100 years.

Please refer to UG 490 OPUC DR 265 for the expected life of the ERT and the expected life of the ultrasonic meter package. For residential diaphragm meters we expect the useful like to be between 30 and 40 years (as long as the meter measures accurately), with some meters lasting beyond 40 years.

NWN's LEA Efficiency Incentive

Policy breakdown: In order to understand the incentives within the Company's proposed LEA policy, you must examine the "Revised LEA" values with therm ranges for each Tier LEA (**Table A**), alongside the possible combinations of gas appliances and their expected loads in therms (**Table B**). The only more efficient outcome from choosing between gas appliances with the same application is selecting a "Backup to Heat Pump" instead of a gas "Furnace". This would result in a 315 therm reduction in expected load. A 315 therm load difference could move a customer one to two LEA Tiers. The smallest difference between two adjacent Tiers is \$400, and the largest difference between three tiers in a row is \$1,400. Thus, \$400 and \$1200 are the outer bounds of what a customer could save (\$400 - \$1,200) by choosing a heat pump instead of a gas furnace. It should be noted that to achieve the full incentive, the new customer's service connection would have to cost as much or more than their LEA cap.

Table A:¹

Revised LEA Results

UPC (Therms)	0-250	251-450	451-650	651+
Direct Testimony LEA	\$3,600	\$3,100	\$2,600	\$1,800
Supplemental Testimony Proposal	\$3,700	\$3,300	\$2,950	\$2,200
Revised LEA	\$3,400	\$2,900	\$2,500	\$1,700
Difference: Higher / (Lower)	(\$300)	(\$400)	(\$450)	(\$500)

Table B:²

Therm loads used for analysis in determining allowances

Residential Equipment	New Construction therms	Conversion therms
Furnace	415	449
Water Heater	123	123
Heating Fireplaces	121	220
Decorative Fireplace	24	22
Decorative Logs	0	0
Range	21	21
Dryer	2	2
Barbeque	12	12
Spa	218	218
Pool	229	229
Generator (small)	12	12
Generator (whole home)	26	26
Backup to Heat Pump	70	70

¹ UG 490 – NW Natural/2200, Kravitz/ Page 25.

² UG 490 – CUB/205, Garrett.