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**BEFORE THE PUBLIC UTILITY COMMISSION
OF OREGON**

UM 1744

In the Matter of

NORTHWEST NATURAL GAS
COMPANY, dba NW NATURAL,

STAFF'S POST-HEARING
BRIEF

Application for approval of an Emission
Reduction Program.

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1. Introduction

Staff of the Public Utility Commission of Oregon (Commission) submits its Post-Hearing Brief in response to Northwest Natural Gas Company's (NWN or Company) Post-Hearing Brief (NWN Brief).¹ Staff agrees with NWN that the remaining issues have been progressively narrowed down and clarified. The following is a list of Staff's original issues, updated to show their present status:

A. Overall High Program Costs, High Costs to Customers and Risks to Customers – still in dispute;

B. Overall Program Benefits are Insufficient – still in dispute;

C. Overly-Generous Participant Incentive Structure - still in dispute;

D. Overly-Generous Company Incentive – still in dispute;

E. Emissions Reduction Methodology – appears resolved in light of NWN's statement that Staff's recommended Northwest Power and Conservation Council (NWPCC) method is acceptable to the Company;²

¹ As part of its response to NWN's Brief, Staff incorporates its Prehearing Brief by this reference.

² While the issue appears resolved, Staff will discuss later in Section 2(E) of this brief the need to lower the CHP Program's cap, and make other related adjustments, to accommodate NWN's request to increase the dollar amount of the Participants' incentive (from \$30 to \$60 per MTCO2) if Staff's preferred NWPCC emissions reduction methodology is adopted.

1 F. Fuel Switching – Staff and NWN are in agreement that NWN’s CHP Program
2 does not constitute unlawful fuel switching; and

3 G. Measurement and Verification (M&V) – Staff accepts NWN’s explanation of its
4 M&V and, as such, this is no longer a disputed issue;

5 H. Use of an Earnings Test

6 For the reasons stated in Staff’s testimony and exhibits, and as summarized in this Brief,
7 Staff recommends the Commission reject NWN’s CHP Program as it has been presented by the
8 Company. Should the Commission decide to approve some version of the Program, Staff
9 requests the Commission structure it in accordance with Staff’s recommendations.

10 **2. Argument**

11 A. Overall High Program Costs, High Costs to Customers and Risks to Customers

12 Staff discusses these issues in its Prehearing Brief at pages 4-5. While NWN addresses
13 the customer cost issue (*see* NWN Brief at 23-24), surprisingly, the Company does not discuss
14 the overall high costs of its CHP Program in its Post-Hearing Brief and only minimally touches
15 upon the risk to customers inherent with the Program.

16 Staff earlier explained how the CHP Program could cost NWN’s customers over \$100
17 million. Recovery of these poorly-defined costs would result in a greater rate increase than that
18 which came out of the Company’s most recent rate case. *See* Application at 5, 9; Staff/300,
19 Klotz/2-3. Although NWN asserts that emission reductions acquired through the proposed CHP
20 Program are possibly the cheapest per ton of any other potential measure, the overall cost of the
21 program, as proposed, could account for more than one-third of the four percent revenue cap set
22 forth in OAR 860-085-0700. *See* CUB/100, McGovern-Jenks/12-19. Staff is concerned that this
23 presents not only significant cost risk but also presents a risk to future emission reduction
24 programs. Again, NWN does not address this concern in its Post-Hearing Brief.

25 Staff is also concerned that the CHP Program as structured places the entire risk of failure
26 upon the Company’s customers. Staff/300, Klotz/3-4; Staff/100, Klotz/11-12. In apparent

1 response, NWN states that the Participants, and the Company, will only receive their incentive
2 payments upon verified and proven carbon savings. NWN Brief at 1. This is well and good and
3 as it should be. Nevertheless, should the CHP Program fail, there will still be costs related to its
4 implementation that will remain and will be assigned to the Company's customers, not its
5 shareholders. *See* NWN/101, Summers/23.

6 Finally, and importantly, there is the issue of the rate impact (cost) of the CHP Program
7 to the Company's customers. Staff's analysis of the Program as originally proposed revealed
8 that the average monthly bill impact to residential customers of the Program would range from
9 \$0.63 to \$2.50. Staff/100, Klotz/5-6. This equals a possible rate increase of 2.2 percent to
10 residential customers and a possible increase of nine percent for industrial customers. *Id.*

11 NWN disagrees with Staff's analysis, relying upon the work of its witness Andrew Speer.
12 NWN Brief at 23. However, Staff's range of possible rate impacts arises from the uncertainty of
13 the cost data set forth by the Company. The Program costs are not clearly identified and the
14 costs will vary depending upon the number of Participants and the operating hours of their CHP
15 facilities. Staff/100, Klotz/5-6. The Company appears to concede this point when it states "NW
16 Natural cannot eliminate all cost uncertainty given the fact that program costs are based on
17 unknown participation levels in the future." NWN Brief at 23.

18 Staff stands by its testimony. NWN's proposed CHP Program would be unquestionably
19 expensive, would carry a cost risk to its customers, and could result in sizable rate increases to its
20 customers. However, it is important to note that, notwithstanding its objections to the CHP
21 Program as NWN has currently structured it, Staff does see value in its general approach of
22 offering incentives to customers to increase the market adoption and industry utilization of CHP
23 facilities.

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1 B. Overall Program Benefits are Insufficient when Compared to Program Costs

2 Staff discussed this issue in its Prehearing Brief at 5-6. NWN discusses the benefits of its
3 CHP Program in its Brief at 24-28.

4 The law requires that NWN's customers receive a benefit from the project and that the
5 Company may receive cost recovery from each type of ratepayer in an amount that is
6 proportionate to the benefit received by that ratepayer. *See* ORS 757.539(3)(c), (8)(a); OAR
7 860-085-0600(2)(b). In compliance with these requirements, NWN states, based upon a set of
8 assumptions, all customer classes will share equally in an economic benefit of approximately
9 \$623,551 per year (resulting from increased throughput). NWN/600, Speer/2-4; NWN/601,
10 Speer/1-2; NWN Brief at 2, 25. In addition, customers will receive an important, but non-
11 economic, benefit related to the reduction of carbon dioxide emissions. NWN Brief at 1.

12 Preliminarily, NWN states, incorrectly, that Staff's legal position is the benefits of the
13 CHP Program must outweigh its costs. *See* NWN Brief at 24. Staff has never made such a
14 statement. To the extent necessary, Staff clarifies that while there must indeed be benefits
15 inherent to an ORS 757.539 program, there is no legal requirement that these benefits must
16 outweigh its costs.

17 Staff appreciates NWN's recent change of position and its willingness to identify, and
18 assign, all economic benefits from its CHP Program to its customers. Staff also acknowledges
19 the worthy goal of ORS 757.539 to encourage utilities that furnish natural gas to offer programs
20 that help reduce greenhouse gas (GHG) emissions. Nevertheless, Staff's position remains that the
21 CHP Program's benefits, both economic and non-economic, pale in comparison to its costs.

22 NWN testified that the economic benefits of the CHP Program are approximately \$6
23 million over 10 years. For comparison, the potential costs of the Program could be as high as
24 \$100 million over the same time period. Staff/100, Klotz/8.

25 As to the non-economic benefit, reduced carbon dioxide emissions, Staff observed that it
26 is unclear the amount of carbon emissions reductions that can actually be attributed to the CHP

1 Program. This is so because it is expected that there will be significant levels of CHP Program
2 market penetration in the near future regardless of programs like NWN's. Staff/200, St. Brown/8
3 (relying upon a study conducted by ICF International). Staff also observed that there may be
4 other benefits of the Program which NWN did not explore, such as possible future compliance
5 with the EPA's Clean Power Plan and a cross-utility benefit of reduced electric demand.
6 Staff/100, Klotz/9-10. These benefits include possible future compliance with the EPA's Clean
7 Power Plan and a cross-utility benefit of reduced electric demand. *Id.* But, while, NWN
8 concedes that such benefits likely exist, the Company states that it found them too difficult to
9 quantify.

10 Simply put, while it is not required for the identified benefits of NWN's CHP Program to
11 outweigh its costs, Staff is deeply concerned that these benefits, both economic and non-
12 economic, pale in comparison to the cost of the Program to NWN's customers.

13 C. Overly-Generous Participant Incentive Structure

14 Staff discussed this issue in its Prehearing Brief at pages 5-11. The Company addresses it
15 in its Post-Hearing Brief at pages 5-14.

16 (i) Simple Payback versus Internal Rate of Return (IRR) methods

17 NWN repeatedly stresses that it is of critical importance to the success of its CHP
18 Program that the Participants receive an incentive payment that allows "simple payback" of their
19 investment costs in a CHP facility within three to four years. *See generally* NWN Brief at 5-9.
20 The Company defines "simple payback" as the estimate of "how long it might take for a
21 company to get its money back from an investment, if nothing goes wrong and ignoring certain
22 other costs." The Company chose the three to four year simple payback period based upon a
23 study by ICF International (ICF Study). NWN/100, Summers/6; NWN Brief at 6. The ICF
24 Study concluded that a three to four year simple payback period would achieve a 30% to 40%
25 market penetration of the economic CHP potential in Oregon. NWN/100, Summers/7; NWN
26 Brief at 6-7. As explained in detail in Staff's Prehearing Brief, NWN, relying upon what is

1 known as the “RELCOST model,” then put a dollar figure of \$30 per MTCO₂ as the amount
2 needed to achieve the three to four year simple payback goal. *See* Staff’s Prehearing Brief at 7.

3 Staff does not agree with NWN’s analysis of the Participant incentive issue. First, as to
4 the need for a three to four year simple payback period, Staff observed that the ICF International
5 study, upon which NWN relied, itself relied upon Primen’s 2003 Distributed Energy Market
6 Survey (Primen’s Survey). Staff testified that the actual CHP facility adoption rates could be
7 higher than those predicted by the Primen’s Survey because the survey was not specific to the
8 United States and because the survey did not capture updates in the energy market since 2003
9 (such as changes in natural gas prices or the final Clean Power Plan rule recently promulgated by
10 the EPA). *See* Staff/200, St. Brown/7.

11 Further on the issue of NWN’s reliance upon the ICF Study as support for a three to four
12 year payback period, Staff testified that the same ICF Study itself concluded, without relying
13 upon the need for Participant incentives, that “it is not unexpected that there will be significant
14 levels of CHP and WHP [waste heat to power] market penetration in the near future.” Staff/200,
15 St. Brown/9 (quoting from the ICF Study).

16 Second, rather than rely upon a “simple payback” method, Staff employed the “internal
17 rate of return” (IRR) method. The IRR is a discount rate that equates the present value of cash
18 outflows for an investment with the present value of its cash inflows. Staff witness St. Brown
19 provided an example from an investment analysis textbook stating that a potential investor would
20 compare the IRR on a project to its own cost of capital and accept any investment proposal with
21 an IRR equal to or greater than the investor’s cost of capital. *See* Staff/400, St. Brown/8; Staff
22 Prehearing Brief at 9. For investments in energy efficiency, Staff used reported IRR hurdle rates
23 from a survey of companies, which might be higher than their costs of capital. Staff’s analysis
24 showed that NWN’s proposed \$30 per MTCO₂ for the Participant incentive was simply too rich.
25 Staff’s analytical approach, as contrasted with Staff’s preferred “reverse auction” proposal
26 discussed later in this section of the Brief, revealed an appropriate range for the Participant

1 incentive of \$0 to \$10 per MTCO₂, with \$3.34 being an acceptable point value. *See* Staff/400,
2 St. Brown/19-20; Staff/300, Klotz/25; Staff Prehearing Brief at 9-10.

3 NWN criticizes Staff's use of the IRR method. *See* NWN Brief at 7-8. The Company
4 generally complains that "Staff, however does not use the IRR method correctly, as it determined
5 that the appropriate range for a customer incentive would be \$0 to \$10 per MTCO₂(e)..." NWN
6 Brief at 7.

7 In response, Staff observes that the Company does not provide any specific examples of
8 how Staff allegedly misused the IRR method. Staff carefully explained how it used the IRR
9 method. *See generally* Staff/400, St. Brown/11-15. Staff's interpretation relies on research co-
10 authored by an ICF International author which states that IRR thresholds were mostly in the 10-
11 15% range for energy efficiency projects among surveyed companies. Staff/400, St. Brown/15.
12 Staff analyzed a range in order to be fair. The bottom of the range, a 10% IRR, can be
13 considered in order to avoid overpaying participants more than is necessary to incent CHP
14 installation. The top of the range, a 15% IRR, can be considered to encourage program
15 participation among smaller CHP units. The Company's vague, non-specific attack upon Staff's
16 analysis should be given no weight.

17 The Company's only "support" for its accusation that Staff incorrectly used the IRR
18 method seems to be merely its dislike for the Participant incentive range produced by Staff's
19 method. This is not "evidence" of anything.

20 The Company then argues that Staff's IRR range of 10% to 15% for energy efficiency
21 investments is overly simplistic and fails to understand that companies need much higher IRRs
22 for such investments. NWN Brief at 7-8. The IRR range of 10-15% is not Staff's own, nor an
23 estimate, instead, the range represents actual reported threshold values by companies operating in
24 the US. The included companies have a demonstrated commitment to climate and energy issues
25 and include all companies in the Pew Center's Business Environmental Leadership Council
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1 (BELC) discussed by NWN witness Summers. *See* NWN/503, Summers/2. Multiple companies
2 in the BELC have significant physical operations in Oregon.

3 While the Company “relied upon internal rate of return estimates when developing the
4 recommended customer incentive level” (*see* NWN Brief at 7, citing to NWN/500, Summers/8-
5 9; NWN/504, Summers/8-9), the Company has not provided any formal analysis in support of an
6 IRR threshold *above* the 15% upper limit of Staff’s IRR range. Instead, the Company relies on
7 three broad arguments: “Companies need high forecasted returns because they have more
8 potential investments than available capital, IRRs are not the same for all projects due to
9 uncertain cash flows, and CHP represents significant risks associated with making a long-term
10 investment outside of their core business.” NWN post-hearing brief at 7-8 (emphasis in
11 original).

12 Staff is not convinced by any of these three arguments. First, having more potential
13 investments than available capital would only dissuade participants from investing in CHP if
14 they had investment opportunities with risk-adjusted rates of return that exceed the risk-adjusted
15 rate of return from investing in CHP. Appendix A of NWN’s Post-Hearing brief presents that
16 Participants can earn rates of return above 20% under NWN’s proposed CHP solicitation
17 program. NWN has not presented any evidence of investment opportunities with risk-adjusted
18 rates of return above 20% that are readily available to its customers. In its response to Staff IR
19 No. 11, NWN used 7.778% as a proxy cost of capital for participating customers, thus rates of
20 return above 20% for customers seem unlikely. Staff/400, St. Brown/4.

21 Second, in response to NWNs argument that IRRs are not the same for all projects due to
22 uncertain cash flows, Staff notes that almost all investment opportunities considered by
23 customers have uncertain cash flows. This circumstance is not unique to CHP investments and
24 thus should not necessarily demand higher than usual rates of return.

25 Third, NWN is proposing to offer technical assistance to companies. Raising awareness
26 of CHP opportunities and offering comprehensive assistance is a better way to address

1 companies' natural reluctance to invest outside of their core business than would be increasing
2 cash incentives to do so. Further, Staff observes that the Company's proposal has not excluded
3 merchant generators, whose business model is to build CHP units and sell the steam and
4 electricity to industry, from participating. Merchant generators are common in the US.

5 (ii) Cost of CHP Facility

6 As part of its calculation of the \$30 per MTCO2 proposed Participant incentive, NWN
7 needed to input information regarding the capital investment costs of various sizes of CHP
8 facilities. NWN's "base case" considered CHP facilities ranging from 500 kW to 45 MW. The
9 Company states that it used vendor-supplied cost data for all sizes except for the 45 MW unit.
10 NWN/500, Summers/13; NWN Brief at 11. NWN states that data from the Energy Information
11 Agency (EIA) was not available for the 45 MW unit, so the RELCOST model was run on cost
12 data compiled by ICF International. NWN Brief at 11.

13 Staff questions the CHP facility cost inputs relied upon by NWN for use in the
14 RELCOST model. *See* Staff/400, St. Brown/5-6. At the time Staff filed its Reply Testimony,
15 Staff witness St. Brown testified that he suspected NWN's CHP facility cost inputs could be
16 overstated and he was awaiting the Company's response to Staff DR No. 45 to further explore
17 the issue. *Id.* Since Staff submitted its Reply Testimony, NWN has completed its response to
18 DR No. 45 and Staff has submitted it into the record as Staff/600, pages 1-3.

19 The Company's response to DR No. 45 demonstrates that incremental capital costs for
20 the 45 MW CHP plant are, as Staff suspected, overstated. In its response to DR No. 45, the
21 Company states that for the 2014 EPA capital costs, "Ther (sic) are items in these sections that
22 frequently are not needed for an existing facility. These items include: fuel supply and electrical
23 service to the installation site, a new building, greater project management cost that would be
24 required for a new location." Staff/600, page 2. The Company also states, "items that are less
25 typical of installation in an existing facility account for over 50% of the total cost." *Id.* The
26 Company further states that "EPA (2014) details their cost estimates, so these items can be split

1 out.” *Id.* However, the Company did not split these items out from the capital costs it analyzed
2 for the 45 MW CHP plant.³ Therefore the Company is overstating the capital costs of a 45 MW
3 CHP plant. Staff believes the Company’s 70% capital cost case presented in NWN/500,
4 Summers/15 is a more reasonable estimate of incremental capital costs for the 45 MW plant.
5 Further, NWN/101, Summers/7 includes an “average cost per kW” of \$800 per kW for CHP
6 plants greater than 20 MW. This is 64% of the capital costs than the Company used in its
7 analyses for the 45 MW plant.

8 Because the capital costs of the 45 MW unit are overstated, the stated need for a \$30 per
9 MTCO2 Participant incentive to generate a three to four year payback period for the 45 MW unit
10 is flawed. Under the Company’s base case, for the 45 MW unit with 70% capital expenditure,
11 and with compression, the payback period with no Participant incentive (\$0) is 4.0 years.
12 Further, the IRR for such a facility is 20.6% without any program incentives. NWN/500,
13 Summers/15.

14 (iii) Reverse Auction Method

15 Because of the complexities of NWN’s simple payback method for calculating the
16 amount of the Participant incentive, and its somewhat subjective nature (being based upon
17 debatable theories, assumptions and factual inputs), Staff advocated use of a “reverse auction” to
18 better ascertain the incentive amount. *See generally* Staff/200, St. Brown/12-17. Staff explained
19 its proposal in general terms, but recommended instead that NWN retain the services of an expert
20 professional consultant to produce an acceptable proposal. Staff/200, St. Brown/-12.

21 NWN argues that a reverse auction would not be useful. The Company believes that the
22 reverse auction concept is unproven, not a good fit for a CHP Program, and would likely make
23 the CHP Program unsuccessful. *See generally* NWN Brief at 12-14.

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25 ³ Confirmation that the Company did not split out the items that are less typical of installation in
26 an existing facility is found at Staff/401, St. Brown/3. There Dr. St. Brown shows the non-split-
out cost of \$1,248 per kW for the 45 MW plant. NWN/101, Summers/69 confirms that the
Company used an identical capital cost of \$1,248 per kW for the 45 MW plant in its analyses.

1 NWN explains that a reverse auction will be viewed by possible participants as creating
2 uncertainty in that they would not know what they would be paid. NWN Brief at 13. In order to
3 improve participation, Staff has proposed that bidders be allowed to recover the reasonable costs
4 of their bid-preparation activities. Staff/200, St. Brown/15-16.

5 NWN further argues that CHP installations “are a poor fit for an auction process.” NWN
6 Brief at 13. According to NWN, such auctions only work when there are simple requirements
7 and highly competitive markets, “both of which are missing in the case of Oregon CHP.” *Id.*

8 But, as Staff explained, reverse auctions have been successfully used in the past in the
9 context of greenhouse gas emissions. Staff/200, St. Brown/13. As to making the auction process
10 simple, Staff is absolutely in favor of that goal, which is why Staff recommended the Company
11 obtain the services of an expert consultant to help construct the auction process.

12 The same remedy (use of an expert consultant) resolves NWN’s other stated concern
13 about running an auction that drives prices down to a single winner, rather than one that
14 incentivizes a number of CHP projects. NWN Brief at 14.

15 For these reasons, Staff stands behind its recommendation that a reverse auction process
16 be employed to best determine the amount of the Participant incentive needed to achieve a
17 successful, reasonably-priced, CHP Program.⁴

18 *D. Overly-Generous Company Incentive*

19 Staff discussed this issue in its Prehearing Brief at page 11. NWN addresses the matter in
20 its Post-Hearing Brief at pages 21-23.

21 The Company continues to request that it receive an incentive of \$10 per MTCO₂. To its
22 credit, NWN is upfront as to why it is seeking this precise amount: because it is essentially the
23 highest incentive amount it can receive under the Commission’s rules (i.e. OAR 860-085-0750).

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25 ⁴ Before leaving this topic, Staff notes that it has no objection to NWN’s proposals to: (1) “lock-
26 in” the amount of the incentive paid to a Participant for the life of the CHP Program; and (2) new
(later in time) Participants would receive an incentive payment that is updated as more current
eGrid or NWPC information related to carbon savings becomes available. *See* NWN Brief at
20-21.

1 See generally NWN/100, Summers/18-19. In describing the Company's logic behind the \$10
2 per MTCO₂, NWN witness Summers testified at the evidentiary hearing as follows: "under the
3 rulemaking, we're allowed to propose one [referring to a company incentive] that is equal to one
4 percent of the revenue requirement or 25 percent of overall program costs. So, in proposing the
5 \$10 incentive, the total cost of this program is \$42.59 a ton. This was about 25 percent of
6 that...So, that's the logic behind the \$10 incentive that's in the record." Hearing Transcript (TR)
7 at 48 (NWN witness Summers).⁵

8 Staff, the Citizens' Utility Board (CUB) and the Northwest Industrial Gas Users
9 (NWIGU) each presented testimony explaining why the \$10 per MTCO₂ Company incentive is
10 too rich. See Staff Prehearing Brief at 11 (citing to relevant Staff testimony); CUB/100,
11 McGovern-Jenks/18; NWIG/100, Finklea/1, 3. Indeed, Staff presented an extensive, compelling
12 analysis indicating that it was possible that *no* Company incentive was required due to earning a
13 margin on increased gas sales and the fact that CHP is a Clean Power Plan compliance
14 mechanism. Staff/200, St. Brown/18-22. In its Post-Hearing Brief, the Company altered its
15 proposal and agreed to return all increased margins associated with its CHP Program to its
16 customers.

17 Nevertheless, Staff, CUB and NWIGU independently concluded that a \$5 per MTCO₂
18 Company incentive would be more reasonable based upon market data. See Staff/300, Klotz/7-
19 8; CUB/100, McGovern-Jenks/18; NWIGU/100, Finklea/1, 3. CUB concluded that reducing the
20 incentive to \$5 would be a way to keep the overall cost of carbon reduction below \$40 per tonne
21 and NWIGU reasoned that allowing a \$5 per MTCO₂ company incentive as payment for the
22 Company's efforts to launch, administer and implement its CHP Program, would result in NW
23 Natural's ratepayers making a cost-effective investment in greenhouse gas emission reductions.
24 NWIGU/100, Finklea/3.

25 ⁵ The Company was equally candid when it states that receiving the maximum incentive allowed
26 by law would provide it with excellent motivation to propose more ORS 757.539 projects in the
future. NWN/100, Summers/19 ("Setting a baseline level for the incentive at around 25
percent...would provide as strong signal to the Company to seek to develop programs...")

1 Staff points out in reply testimony that within the carbon offset market, NWN could
2 expect to receive \$5 per ton for its efforts as if it were independently developing a carbon
3 reduction project. Here, NWN is leveraging ratepayer dollars and regulatory support. Therefore,
4 an incentive for the efforts undertaken by NWN should be justified by the work undertaken and
5 informed by the broader market for emissions reduction projects. Staff views a Company
6 incentive of \$5 per ton to be more reasonable than a \$10 per ton incentive. Again, Staff must
7 observe that NWN still has not submitted a reasoned justification for a dollar amount incentive
8 for the work it proposes to perform related to its CHP Program. Staff/300, Klotz/8.

9 *E. Emissions Reduction Methodology*

10 Staff discussed this issue in its Prehearing Brief at pages 12-13. NWN addresses the
11 matter in its Post-Hearing Brief at pages 14-20.

12 Preliminarily, and importantly, NWN now states that it is willing to use the emissions
13 reduction methodology proposed by Staff (i.e. the Northwest Power and Conservation Council
14 (NWPCC) method), so long as the incentive paid to Participants is adjusted accordingly. *See*
15 NWN Brief at 16, 19.

16 Staff's take-away from NWN's briefing on this matter is that it is no longer a disputed
17 issue. In other words, while the Company discusses the reasons why it prefers the eGrid model,
18 it repeatedly states that Staff's recommended NWPCC model is "acceptable." The Company's
19 discussion seems less directed at discrediting the NWPCC model and more focused on
20 explaining why the utility-specific model proposed by PGE is unacceptable. *See* NWN Brief at
21 15-19. In light of NWN's change of position on this issue, Staff will rely upon the argument
22 presented in its Prehearing Brief and, other than one caveat discussed in the next paragraph, not
23 further address this issue other than to note that: (1) it disagrees with NWN that the eGrid model
24 is superior to the NWPCC model; and (2) Staff agrees with NWN that PGE's utility-specific
25 model is not appropriate for measuring emissions reductions related to the Company's CHP
26 Program. *See* Staff's Prehearing Brief at 12-13 and the testimony cited therein.

1 It is important to note that the NWPCC emissions model produces a range of between
2 700 to 1800 lbs/MWh and Staff witness Klotz posed an example that employed a point value of
3 850 lbs/MWh as a reasonable emissions reduction rate. See Staff/300, Klotz/17, 25. This is to
4 be compared to the eGrid value of 1,579 CO2 lbs/MWh that NWN proposed to use. NWN now
5 states that it willing to use the 850 CO2 lbs/MWh value but to do so would require increasing the
6 Participant incentive payment to \$60 per MTCO2 in order to achieve a comparable payment as
7 proposed under the eGrid method. NWN Brief at 18-20.

8 Staff agrees with NWN that such an increase to the Participant incentive would be
9 required if the NWPCC 850 CO2 lbs/MWh value is used instead of the eGrid 1,579 CO2
10 lbs/MWh value. However, in order to keep the same financial “cap” on the CHP Program as
11 proposed by NWN, if the NWPCC value is used, then NWN’s proposed Program cap of 240,000
12 MTCO2 per year for 10 years would need to be lowered to 120,000 MTCO2 per year. Failure to
13 do so would mean the potential costs of the CHP Program would double, from \$100 million to
14 \$200 million, with a concurrent doubling of the potential rate impact to NWN’s customers.

15 F. Fuel Switching

16 Staff discussed this issue in its Prehearing Brief at pages 13-14. NWN addresses the
17 matter in its Post-Hearing Brief at pages 29-30.

18 NWN argues that the CHP Program would not cause what is referred to as “fuel
19 switching” for two primary reasons.⁶ First, the Company asserts that installation of CHP is not
20 fuel switching because it is a form of electric generation. NWN Brief at 30. Second, the
21 Company argues that ORS 757.539 authorizes fuel switching. *Id.* This is so because natural gas
22 is a fossil fuel and, as such, the only way to use natural gas as a carbon reduction measure is to
23 employ it instead of another, higher carbon emitting fuel. *Id.*

24 Without agreeing or disagreeing with NWN’s first point, Staff interprets ORS 757.539 as
25 does the Company. The statute necessarily authorizes the use of natural gas, a fossil fuel, to

26 ⁶ Like PacifiCorp and PGE, Staff relies upon the Commission’s definition of “fuel switching” to mean “any substitution of one type of energy or fuel for another.” OAR 860-027-0310(1)(b).

1 displace another, more intensive-based carbon fuel. Staff notes that CUB and NWIGU reach the
2 same conclusion, for the same reason, in their respective Prehearing Briefs. *See* CUB Prehearing
3 Brief at 15-16; NWIGU Prehearing Brief at 6.

4 *G. Measurement and Verification (M&V)*

5 Staff discussed this issue in its Prehearing Brief at page 14. NWN addresses it in its
6 Post-Hearing Brief at pages 32-36.

7 Staff initially had concerns with Measurement and Verification (M&V) aspects of
8 NWN's proposed Combined Heat and Power (CHP) Program. In light of the Company's further
9 testimony, explanations and commitments, Staff's concerns are resolved and this is no longer an
10 issue for Staff. *See* NWN/300, Summers/26-32; NWN Brief at 32-36.

11 *H. Use of an Earnings Test*

12 The Company vigorously objects to the application of an earnings test to the recovery of
13 its CHP Program costs, including both incentive and non-incentive costs. *See* NWN Brief at 28-
14 29. Indeed, NWN states that, should the Commission decide to impose an earnings test, it will
15 not offer the CHP Program. NWN Brief at 3, 28.

16 Staff agrees with NWN that the Company incentive costs should not be subject to an
17 earnings test. To do otherwise would potentially eliminate the only economic benefit the
18 Company can obtain under its CHP Program. Staff/300, Klotz/29. Staff generally supports
19 CUB's request to apply the earnings test to the other CHP Program costs. *See* CUB Prehearing
20 Brief at 9-11; CUB/100, McGovern-Jenks/21-22. However, Staff did not in testimony, nor does
21 it now in this Brief, recommend a particular design for application of the earnings test, such as
22 that recommended by CUB, but leaves its application to the Commission's discretion.

23 **3. Conclusion**

24 For the reasons stated, Staff recommends the Commission reject NWN's CHP Program
25 as it has been presented by the Company. Should the Commission decide to approve some
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1 version of the Program, Staff requests the Commission structure it in accordance with Staff's
2 recommendations set forth in its testimony and as summarized in this Post-Hearing Brief.

3 DATED this 26th day of January, 2016.

4 Respectfully submitted,

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