Before the Public Utility Commission of Oregon
LC 60

In the Matter of NW Natural's 2014 Integrated Resource Plan	NW Natural's Reply Comments

I. INTRODUCTION

Northwest Natural Gas Company (NW Natural or Company) files these Reply Comments in response to both Public Utility Commission of Oregon (OPUC) Staff's Initial Comments and the Opening Comments of the Citizens' Utility Board of Oregon (CUB), both submitted in the subject docket on November 24, 2014.

Prior to addressing Staff's and CUB's specific comments, the Company would like to thank all participants (collectively referred to hereafter as Parties) in its Integrated Resource Planning (IRP or Plan) process for their engagement, comments, and general spirit of collaboration. As mentioned in Staff's comments, this process began in August 2013, and in addition to seven Technical Working Group meetings, there were additional workshops and informal meetings.

Below are the Company's responses to the comments made by Staff and CUB followed by an additional comment about the collaborative process.

II. THE ACTION PLAN

A. <u>Resource Additions and Changes</u>

In their Comments, Staff states:

> NWN is requesting acknowledgement of its Action Plan, which includes, but is not limited to, completing Clark County distribution projects to address Vancouver load center needs and refurbishments to its Newport Liquefied Natural Gas (LNG) Storage Facility. Both of these projects have phases that may have already commenced, which would exclude them from the Action Plan. Staff continues to investigate the status of these projects and will work with the Company and Parties to amend the Action Plan, if appropriate. Potentially, NWN could define the individual project phases that exist and

> include only those phases that have not begun for consideration for Commission acknowledgement.[1]

Staff correctly points out that both the Clark County distribution projects and refurbishment of the Newport Liquefied Natural Gas (LNG) storage facility are phased projects where some phases have already commenced. As will be discussed in more detail below, NW Natural believes that multiple phases characterize many capital projects and projects may not align well with the timing of the Company's IRP filings. However, the Company agrees to revise its Action Plan such that it is only seeking Commission acknowledgement on project phases that have not been started. NW Natural, therefore, proposes revising Action Item 2.1 in the following manner:

To:

b. Complete those Clark County distribution projects included in Appendix 6 which have ***not yet started*** and which address, in part, Vancouver load center needs and have an estimated timing for completion within the next five years. ~~with an estimated total capital cost of $25 million.~~

c. Proceed with ***those projects not yet begun on*** the Newport refurbishment project and continue investigating Portland Gasco refurbishment alternatives. Estimated timing of Newport refurbishment is over the next three years.~~ at an estimated cost of $25 million.~~

Lastly, Staff states "…the Company's conclusion regarding the Cross-Cascades pipeline *moving forward without considering other options* was revised…"[2] While this is more a technicality, NW Natural feels it is an important one and wants to clarify that it did consider options other than the Cross-Cascades pipeline in its analysis throughout the process. The analysis shows, and did show, the Cross-Cascades pipeline as the least cost option for customers. The most significant change between the Draft IRP and the final IRP is the move from a preferred portfolio approach to an adaptive planning approach that keeps the Company's supply-side options open while uncertainty about interstate pipelines is resolved. Note the results of the Company's analysis (see Table 7.7 on page 7.17) still show Cross-Cascades as the lowest cost option. However, this least-cost option is uncertain as it is dependent upon the construction of interstate pipelines the Company cannot control. Therefore, NW Natural feels that the best option for customers is not to commit to one option, but preserve optionality with Mist Recall. This approach was developed with the benefit of Stakeholder input. In sum, NW Natural feels that characterizing the Company's plan in the earlier stages of the IRP process as one that chose Cross-Cascades "without considering other options" is inaccurate.

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1 Staff's Initial Comments, page 2 (emphasis added).

2 Ibid.

III. HEDGING

NW Natural appreciates CUB's detailed comments on long-term hedging and notes that the issues identified are reasonable and, for the most part, issues that the Company has identified internally and looks forward to addressing through analysis and workshops with Parties. Therefore, NW Natural believes that most of CUB's comments can best be addressed through clarification rather than rebuttal. Additionally, NW Natural would like to thank CUB for providing its presumed recommendation on the item in its Opening Comments as this moves the discussion forward.

In their Opening Comments, CUB noted there is more potential for upward mobility of gas prices than there is a possibility for prices to decline and states that it is "appreciative of the Company's recognition of the upward (price) risk."[3] CUB further notes that it agrees with NW Natural and its consultants' assessment that "additional demand for gas will pose a challenge for the maintenance of low gas prices."[4] CUB also points out that it believes that long-term hedging is a valuable consideration in IRP planning.

Despite this, CUB states it "cannot support NW Natural's proposal to increase its long-term hedging strategy to allow for up to 35% of its gas supply to be hedged for up to 30 years"[5] for the following primary reasons:

1. NW Natural needs to provide additional analysis examining the time horizon of various long-term products, their relative risks, and a stronger demonstration that increasing long-term hedges is part of a least-cost/least-risk procurement strategy;
2. NW Natural needs to provide adequate time to allow Parties to review and vet this analysis before moving forward;
3. NW Natural's current gas reserves prices are above current prices, as well as above expectations of prices for most of the next decade, pointing out the risks of long-term hedges; and
4. A more cautious approach to long-term hedging should be taken, including the possibility of holding an RFP for long-term hedges.

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[3] CUB's Opening Comments, page 3.

[44] Ibid.

[5] CUB's Opening Comments, page 4.

Before the Company addresses the above concerns one-by-one, it would like to restate that it is seeking to increase its long-term hedges from "the current level of approximately 10% *up to 25%*"[6] of its gas requirements, not to 35%, or to 25-35%, as is mentioned numerous times in CUB's comments. While NW Natural's hedging consultant, Aether Advisors LLC (Aether), recommends that the Company increase its long-term hedges to 25-35% of its portfolio, NW Natural believes 35% may be too aggressive and is seeking to increase its long-term hedges to *up to 25%* of its gas needs, as stated in Action Item 4.1.

Furthermore, Action Item 4.1 does not state that the Company is only considering hedges with terms in the 30-year range. As is stated on page 3.39 of the IRP, NW Natural defines long-term hedges as those that extend beyond the next three PGA-Years. While the Company is considering gas reserves and agrees with Aether that reserves have characteristics that make them a particularly attractive long-term hedge for customers, it is considering a wide range of gas portfolios with long-term hedges of different terms, and is analyzing these strategies from the perspective of its customers.

CUB Hedging Concern 1: Additional analysis is necessary to support increased long-term hedging

NW Natural is looking to find the best gas portfolio for customers, and recognizes that analysis is necessary to determine whether increased long-term hedging is in customers' best interests. CUB states that "NW Natural has failed to provide analysis that distinguishes between the risks of two, four, or ten-year hedges and the risks of a 30-year hedge"[7] and "the Company should analyze a broad range of risks and timelines associated with a full range of long-term products available."[8] NW Natural acknowledges that additional analysis comparing long-term hedging strategies with different hedge durations and risk profiles is necessary to show what form of long-term hedging is best for customers. The Company began the comprehensive analysis described by CUB shortly before the IRP was filed, and although it is not yet complete, it will quantitatively compare how a broad range of hedging strategies would have performed for customers in the previous decade and how those strategies might be expected to perform over the next 20-plus years. The strategies represent a spectrum of hedge percentages, terms, and layering. NW Natural looks forward to discussing this analysis and how it can be improved with Parties during the Company's proposed long-term hedging workshops.

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[6] *See* Action Item 4.1 on page 1.21 of NW Natural's 2014 IRP.

[77] CUB's Opening Comments, page 7.

[8] Ibid.

CUB Hedging Concern 2: NW Natural needs to provide Parties adequate review time

CUB states it "believes it is important not to rush into long-term hedging agreements…until stakeholders have had ample time to review the details of the Company's proposals"[9] and that it "is concerned about the opportunity to vet alternatives to physical hedging, such as financial tools, before the Company proposes to more than double its long-term physical hedges."[10] NW Natural understands this concern, and this is why the Company has proposed two workshops as part of the process to "propose specific long-term hedging parameters for Commission and Parties review prior to June 30, 2015".[11] Specifically, as NW Natural detailed through discovery, it proposes the following process to allow Parties adequate time to review the parameters for evaluating long-term hedges:

1. At a workshop tentatively planned for March 2015, the Company will present the comprehensive analysis described above. This workshop will have two objectives:

    a. Gather Parties feedback on the analysis and how Parties would like to see it improved; and
    b. Begin discussing how to use the results of said analysis to construct parameters (i.e. decision criteria) for evaluating long-term hedges.

2. NW Natural plans a second workshop, tentatively in May 2015 to:

    a. Show the updated analysis; and
    b. Present its proposed parameters for evaluating long-term hedges to gather Parties' feedback.

NW Natural plans to provide the analysis and parameters to Parties in advance of the workshops for review. NW Natural would like to highlight that it is looking to propose specific decision criteria for evaluating long-term hedges before it presents a specific long-term hedge opportunity to Parties.

CUB Hedging Concern 3: The risks of gas reserves

CUB points out NW Natural's current gas reserves are above current spot prices and that "(t)his is an inherent problem with long-term hedges: if they are out of the money,

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9 CUB's Opening Comments, page 7.

10 Ibid, page 5.

11 *See* Action Item 4.1 of NW Natural's 2014 IRP

customers have to live with higher prices for years."[12] While this is true, it is important to point out that, conversely, long-term hedges have the opportunity to save money for customers for many years as well. If no risk were involved, the discussion would be considerably simpler. Furthermore, as is discussed in more detail below in the response to Staff's Initial Comments, NW Natural would like to reiterate that while price is an important factor in evaluating long-term hedges, the primary goal of a hedging program is not to "beat the market," but to increase price *stability* for customers. While a hedge always has the risk of being out of the money, as NW Natural, Aether, and CUB point out, a long-term hedge beginning in the near-term is *more likely* to save customers money than it would be to cost them, while at the same time providing long-term price stability. It is NW Natural's view that long-term price stability is something customers desire since it makes capital decisions---like whether to buy a new furnace--- less risky. While short- and medium-term hedging can provide protection against short-term price spikes related to weather and other phenomena having temporary impacts, long-term price stability can only be achieved through some form of long-term hedging.

CUB Hedging Concern 4: A cautious approach to long-term hedging is best

While NW Natural notes that an overly cautious approach can result in missed opportunities, the Company agrees with CUB on this point, as evidenced by the Company's proposal to hold workshops with Parties on the long-term hedging issue with the objective of arriving at the best outcome for customers. CUB also states that the "RFP process that PacifiCorp used is a low-risk method to test product availability"[13] of long-term hedges. While NW Natural is not opposed to issuing an RFP for the purpose of identifying and evaluating potential long-term hedges, it believes that products that require substantial negotiations and detailed contracts, such as gas reserves, do not lend themselves to the RFP process. Therefore, while CUB posits that holding an RFP may provide the broadest set of options for customers and lead to the optimal long-term hedging product for them, NW Natural fears that it may not have the intended result. NW Natural looks forward to discussing with Parties during the proposed workshops how to evaluate all opportunities that may provide the best outcome for customers.

NW Natural is concerned with Staff's initial Comments regarding long-term hedging, as they seem to take a view that the Company believes could have an adverse impact on customers. Staff states that "NWN's hedging strategy has resulted in substantial losses

[12] CUB's Opening Comments, page 6.

[13] Ibid, page 4.

for its customers for the period 2009 to 2014."[14] The Company believes this statement is misguided for the following reasons:

1. The comment fails to address the primary goal of hedging, which is to reduce price volatility for customers.
2. The comment focuses on a relatively limited time period that was marked by a steep decline in gas prices due to the combination of the "shale gale" (supply increase) and the worst economic conditions (arguably) since the Great Depression (demand decrease).

1. The primary goal of hedging is to reduce price volatility for customers.

As NW Natural has repeatedly stated in its Purchase Gas Adjustment (PGA) filings and in any discussion with Parties about hedging, the main purpose of the Company's hedging program is to mitigate rate swings for customers (i.e. to reduce rate volatility) with the knowledge that in some periods this will mean that hedges will be in the money and in some periods they will be out of the money. NW Natural's hedging program has accomplished this goal.

Since the core structure of the current PGA guidelines were adopted for the 2007-08 gas year, the average annual change in the retail residential customer rate (i.e. the year to year change in retail rate) has been 7%.[15] Had the Company not engaged in any financial hedging the average annual change would have been around 20%. This result is even starker when the gas commodity portion (commodity costs and commodity deferral) of the retail rate is compared with what it would have been. The average annual change in the gas commodity portion of rates for NW Natural's Oregon customers has been 18% since 2007, though it would have been roughly 60% had the Company not made any price hedges on behalf of its customers. The Company's hedging program has been highly successful in smoothing changes in rates for customers.

2. A five year time frame is too short to evaluate the merits of a hedging strategy, particularly when that time frame represents a time of falling prices.

Mark-to-market comparisons like the one Staff is presumably making are highly dependent upon the period in question. While hedges on average turned out to be higher priced than the resulting spot prices for the 2009-2014 time period, the opposite can be said for 2000 to 2008. Furthermore, hedging provides protection against price spikes, such as those during the Energy Crisis of 2000-01, after hurricanes in 2005, and

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[14] Staff's Initial Comments, page 2.

[15] In absolute value terms.

to a lesser extent the cold winter experienced across North America last year. Due to this asymmetric nature of natural gas prices, the possibility for hedges to be far in the money (for spot prices to spike dramatically) is greater than the possibility for hedges to be far out of the money (for spot prices to drop dramatically). For example, the largest monthly benefit in comparison to spot prices from hedging during the 2000-2014 time period was a $70 million savings relative to buying spot in December of 2000, while the largest mark-to-market monthly premium paid for hedging in rate stability was $33 million in March of 2009. Furthermore, evaluating hedging after a time of falling prices and drawing conclusions upon this time period is dangerous. After all, prices have a much higher probability of a dramatic increase than a dramatic drop when prices are relatively low. It is quite possible gas prices could rise by $10 per Dth or more (like they did last winter), but much less likely for prices to fall on a sustained level much below current prices of roughly $4 per Dth since it is not reasonable to expect prices to drop below the cost of production for extended periods, much less go negative. Ceasing hedging operations now has the potential of being the equivalent of getting out of the market at the trough in response to the losses that took place during the downturn.

In light of this, from NW Natural's perspective, it would be inaccurate to characterize the Company's hedging program from the 2000-01 gas year through the 2013-14 gas year as a program that resulted in "substantial losses" for customers. The savings that would have been achieved from *not* protecting customers from rate swings through hedging gas prices represent roughly 3% of commodity costs over this period, or less than 2% of the residential retail rate

In addition to the comment addressed above, Staff also states that for "NWN to increase its long-term hedge position of gas requirements from 10 percent up to 25 percent, the Company should also make a showing that its customers will be protected against unreasonable losses as a result of the increased long-term hedges." NW Natural is concerned by the subjective nature of this statement. What are "unreasonable" losses? NW Natural and Aether have made the case that it is more likely that long-term hedges made in the near future will be far in the money than far out of the money due to the asymmetric nature of gas prices. Therefore, the cost of production and the zero lower bound of possible prices can be seen as protection against "unreasonable" losses. NW Natural looks forward to working with Parties to determine the long-term hedging strategy that provides the best combination of price, and most importantly, price volatility protection for customers. During this process, NW Natural requests that Staff defines what is unreasonable as this can move the process forward and help the Company understand more concretely what conditions Staff requires to support additional long-term hedging.

Lastly, Staff points out that it is continuing "to explore the possibility of investigating NWN's proposed hedging strategy in a separate docket with the Company and IRP participants."[16] NW Natural does not see this issue being resolved within the timeline in this IRP, and this is why it has proposed a timeline for Parties' involvement that goes past the expected IRP acknowledgement date. The Company believes that this comports with both the suggestion of the Commission and Staff's desire to bifurcate this issue from the current IRP.

IV. GAS REQUIREMENTS FORECAST

The forecasting methodologies NW Natural used in its 2014 IRP have not changed in any material way from those presented at the Company's first Technical Working Group (TWG) meeting held on August 22, 2013. NW Natural devoted this meeting entirely to explaining the Company's load forecast. NW Natural views TWG meetings as the best and appropriately early venue for robust discussions on the forecasting methodologies used and the results obtained by the Company.

NW Natural discussed the Company's customer and load forecasts, natural gas price forecasts, and design weather at its TWG meetings held on August 22, 2013, and October 2, 2013. These discussions included both methodologies and forecasting results. Additionally, NW Natural discussed its preliminary resource planning results at the TWG meeting held on March 7, 2014. The resource planning results were predicated on the underlying Base Case customer and load forecasts using the design weather pattern. NW Natural solicited questions from Parties and requested input at each of the Company's TWG meetings, including those meetings which included as topics the Company's customer and load forecasts, natural gas price forecasts, and design weather.[17]

CUB's Opening Comments did not include any material related to future gas requirements as discussed in Chapter 2 of the Company's 2014 IRP.

Staff's Initial Comments included a "non-comprehensive list of issues" which Staff indicated it will examine subsequent to the November 24, 2014 filing date of their comments. Staff's list[18] includes:

- Verifying the assumptions and analysis associated with NW Natural's Commercial Firm Sales load forecast;

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16 Staff's Initial Comments, page 2.

17 *See* Chapter 9 of the NW Natural's 2014 IRP for a complete list of TWGs held and summary of the content discussed at each meeting.

18 Staff's Initial Comments, pages 3 - 4.

- Confirming the rates used in NW Natural's IRP for attrition over time of existing customers are calculated using sound methods and reflect accurate and reliable trends during the planning period;
- Confirming the econometric models NW Natural used to forecast future levels of customers and usage per customers include the appropriate key variables, do not exclude key variables, and appropriately specify the empirical model's error structure;
- Confirming the Company's forecast is not outperformed by other models that include appropriate explanatory variables and specifications of the error structure;
- Confirming that NW Natural's subject matter expert panels, in developing certain near-term projections, used well-conceived assumptions and that resulting projections align with market conditions and recent economic trends;
- Confirming that members of NW Natural's subject matter expert panels, used in developing certain near-term projections, are qualified and capable subject matter experts;
- Examining the design weather pattern used by NW Natural to confirm it is a reasonable representation of the potential stresses placed on the system by an extreme weather season;
- Obtaining an understanding of NW Natural's changes to design weather from that used in previous IRPs to ensure that such changes represent an improvement of system planning;
- Validating that NW Natural's Base Case natural gas price forecast is appropriate and that the "High" and "Low" gas price sensitivity forecasts NW Natural used appropriately reflect the band of uncertainty surrounding future gas prices; and
- Confirming NW Natural appropriately forecasted future loads in the Company's Salem load center and that this load forecast sufficiently warrants construction of the South Salem Feeder.

While NW Natural appreciates the thoroughness that Staff is giving this area, given the numerous areas still under investigation by Staff, NW Natural would appreciate Staff communicating to the Company the results of its examination as soon as these are available, since the Company has an extremely limited timeframe for responding to any recommendations received this late in the formal process.

V. SUPPLY-SIDE RESOURCES

Staff's Initial Comments regarding supply-side resources begins with a restatement of one of the IRP guidelines, as follows:

> Guideline 13: Resource Acquisition.
> *b. Natural gas utilities should either describe in the IRP their bidding practices for gas supply and transportation, or provide a description of those practices following IRP acknowledgment.*[19]

According to Staff, NW Natural's 2014 IRP "did not provide sufficient detail to allow Staff to do a thorough review of the purchasing, hedging and risk management plans, policies and strategies."[20] Staff's comments do affirm that NW Natural did include a "brief discussion of NWN's Supply Diversity and Risk Mitigation Practices" in Chapter 3 of the IRP. But in sum, "Staff believes…that there is inadequate recognition of the Guideline 13 requirement."[21]

NW Natural believes that Guideline 13 was developed with full recognition that each local distribution company engages with Staff on an annual basis in PGA proceedings, as well as regular briefings in which gas acquisition practices are fully discussed.[22] That is why Guideline 13 allows for the description of those practices to be provided, as shown above, "following IRP acknowledgement." The wording makes it clear that the provision of such descriptions is not required prior to IRP acknowledgement.

In fact, Staff's comments have the potential for creating requirements that would be duplicative of the PGA process. Staff says that "[t]he PGA is the proceeding where the result of the vetted resource acquisition decisions and process is reviewed."[23] Perhaps this issue is one of semantics. The Company views "resource" decisions, such as the acquisition of more storage and/or pipeline capacity, as the province of the IRP process. Those resource decisions typically are long-term in nature, and so require long-term projections of loads and resource costs, including commodity gas costs.

By comparison, the PGA process is where decisions are reviewed regarding how best to utilize the Company's gas supply resources, including gas procurement strategies. Those

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19 Staff's Initial Comments, page 4.

20 Ibid.

21 Ibid, page 5.

22 A quarterly meeting guideline was one of the outcomes of the UM 1286 proceeding.

23 Staff's Initial Comments, page 5.

strategies may include some very short-term approaches that could come and go far too quickly to be addressed within the relatively lengthy IRP process.

A recent example is the loss of the Plymouth LNG plant as a NW Natural supply resource.[24] The long-term analysis in the IRP serves to vet strategies such as relying on segmented capacity to fill the resource gap for some period of years, though segmented capacity itself is less than fully reliable. But while the IRP process reviews those kinds of strategies and their implications, the Company needs to make immediate decisions to secure supplies for the upcoming winter, which could be concluded by the time the OPUC issues an Order in the current IRP proceeding. Those current purchase decisions, such as the acquisition of citygate deliveries, necessarily fall within the PGA process for review.

Additionally, Guideline 13 has been in place for numerous IRP cycles and NW Natural has not included its current Gas Supply Risk Management Policies (GSRMP) or Gas Acquisition Plan (GAP) in any of its previously acknowledged IRP's that were filed and were acknowledged as complying with the guideline in question.

In sum, the Company believes that Staff's comments imply a meaning to Guideline 13 that is belied by its own wording. In addition, Staff's narrow interpretation of Guideline 13 would lead to an IRP that duplicates part of the PGA, but along a different timeline that would be at odds with a workable gas acquisition review process. While NW Natural understands guideline interpretation can evolve, it disagrees with both Staff's interpretation and its reasoning for why the requested information should be reviewed in the IRP.

VI. DEMAND-SIDE RESOURCE AND AVOIDED COST DETERMINATION

Staff's Initial Comments state :

> Staff . . . is considering whether or not to recommend the Company update targets as part of this IRP to include savings for which the Commission granted cost effectiveness exceptions [Order No. 14-322], or whether the Company's original targets should be supported with an understanding that updated numbers will be provided in the next annual IRP update.[25]

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[24] The events at Plymouth have been described and discussed in great detail in the 2014 IRP and elsewhere and will not be repeated here.

[25] Staff's Initial Comments, page 7.

NW Natural discussed updating its demand-side management (DSM) targets so they were consistent with the decision issued in Commission Order No. 14-322, which concluded Docket No. UM 1622, the Commission's Investigation into the Cost Effectiveness of Certain Gas Energy Efficiency Measures. Energy Trust of Oregon (Energy Trust) suggested waiting to update the 20-year efficiency deployment schedule until the next annual IRP update for the following reasons:

1. The full outcome of UM1622 will be known within approximately 6 months and can be better incorporated into the deployment for the next update including:
    a. Application of a hedge value to avoided costs for cost effectiveness screening, and
    b. The outcome of the incentive cap proposals which may potentially impact the continuation of additional measures.

2. Energy Trust provided the current DSM savings estimates to NW Natural in January 2014. Since then, Energy Trust has commissioned and received a new resource assessment study with updated measure costs, performance, and market penetration levels. Energy Trust would like to start using the new updated measure information, but for version control, they do not begin an analysis with one set of assumptions and switch mid-stream to updated assumptions. If they begin an IRP with one set of assumptions, they may refine information but will not completely revise those assumptions within the same analysis. Energy Trust prefers to provide updated DSM annual savings targets with the Company's Annual IRP Update because at that time they will be able to model the savings potential using the updated measure information, updated avoided costs, and any program changes due to the proposal in Docket UM 1622 that the Commission look at incentive caps.

In addition to Energy Trust's reasons for waiting to update the DSM targets, NW Natural believes that the IRP represents a resource plan which is based on the facts which are known at a particular point in time. Since the Company filed its IRP prior to issuance of Order No. 14-322, the current IRP submission justifiably should not be updated to reflect facts which were unknown at the time the planning was performed. The annual IRP update provides an opportunity to update results to reflect any significant changes which have occurred after the planning process and the Company believes this is the proper timing for updating DSM targets.

In order to fully comply with IRP Guideline 4(n), NW Natural will update its Action Plan to add the following Action Item 3.4:

> Consistent with the methodology presented in Chapter 4, NW Natural will ensure Energy Trust has sufficient public purpose charge funding to acquire the

> therm savings identified and approved by the Energy Trust's Board of approximately 5.2 million therms in 2015 and 5.4 million therms in 2016.[26]

VII. ENERGY POLICIES AND ENVIRONMENTAL CONSIDERATIONS

Chapter 5 of NW Natural's 2014 IRP includes 25 pages discussing potential policies targeting greenhouse gas emissions[27] and an analysis performed by the Company of the expected impact on load (and, therefore, resource requirements) of a future carbon tax implemented as a policy targeted at reducing greenhouse gas emissions.[28] This chapter, which did not appear in previous NW Natural IRPs, results in part from the Company's belief that future policies targeting greenhouse gas emissions may be highly relevant to the Company's planning for future resource requirements.

NW Natural discussed with Parties at its April 3, 2014, TWG meeting its carbon price analysis as a key component in a larger discussion regarding the Company's risk analysis.

CUB's Opening Comments touched on NW Natural's discussion of energy policies and environmental considerations. CUB commended NW Natural's working with Parties to incorporate analysis of potential impacts of future carbon regulation into the Company's 2014 IRP. CUB stated that, while it understands the guidelines proposed by the Environmental Protection Agency (EPA) under Section 111(d) of the Clean Air Act are new (issued June 2, 2014) and not yet finalized, it is essential that all Parties understand the potential effects of these rules and model what a carbon constrained world will look like. CUB expressed its appreciation that NW Natural has, in the Company's 2014 IRP, attempted to do that.[29]

Staff's Initial Comments stated that "all of the climate change risks and opportunities beyond the immediate regulatory effects of EPA's 111(d) rule are not currently accounted for in the planning cycle."[30] Staff's comments included their belief that "it is time for NWN to begin exploring how to analyze climate change risks and

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26 The 2015 and 2016 savings targets approved by Energy Trust's Board are the IRP targets updated with more current market information, including the extension of the non-cost effective measures investigated in UM 1622 until April 30, 2015.

27 Pages 5.1 through 5.5.

28 Pages 5.6 through 5.25.

29 CUB Opening Comments, pages 2 through 3.

30 Staff Initial Comments, page 8.

opportunities"[31] and that "Staff will recommend that the Company and participants begin these discussions as part of NWN's next IRP process."[32]

Acknowledging CUB's observation noted above, EPA released its proposed guidelines under the authority of the Clean Air Act's Section 111(d) less than 90 days prior to NW Natural filing its 2014 IRP, a timeframe the Company believes is far less than sufficient to solicit and collect Parties' input regarding the proposed guidelines and complete any substantive analysis incorporating that input. Additionally, NW Natural understands EPA's proposal to have two main elements: (1) State-specific emission rate-based CO_2 goals and (2) guidelines for the development, submission and implementation of state plans.[33] It is not immediately apparent to the Company what the "immediate regulatory effects" of EPA's proposed Section 111(d) rule might be, as EPA's proposal notably does not prescribe how any one state should meet its proposed goal.

NW Natural's 2014 IRP includes an analysis of a Base Case natural gas price scenario reflecting what the Company considered to be the most likely regulatory compliance future with respect to carbon dioxide, nitrogen oxides, sulfur oxides, and mercury emissions. The Base Case natural gas price forecast that NW Natural used in its 2014 IRP, obtained from a third party provider, incorporates future prices on the carbon content of combustible fuels such as natural gas. NW Natural additionally developed two alternative scenarios having future carbon prices greater than those considered in the Base Case price forecast, basing the highest carbon price scenario ("PSU") on a carbon price scenario developed by Portland State University's Northwest Economic Research Center (NERC) as part of an initial report to the Oregon Legislature.[34] As the gas prices NW Natural uses in its 2014 IRP incorporate a non-negative carbon price at every time in the planning horizon, such carbon prices define the time profiles of CO_2 compliance requirements.

NW Natural assessed the impact of alternative regulatory compliance futures on its resource requirements, concluding that the primary resource planning outcome in the highest carbon price scenario is to delay implementation of two resource projects.[35]

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[31] Ibid.

[32] Ibid.

[33] From the Federal Register, accessed December 8, 2014 at https://www.federalregister.gov/articles/2014/06/18/2014-13726/carbon-pollution-emission-guidelines-for-existing-stationary-sources-electric-utility-generating#h-8 .

[34] NERC's final report is available at https://olis.leg.state.or.us/liz/2013I1/Downloads/CommitteeMeetingDocument/42034 (accessed December 8, 2014).

[35] *See* pages 5.25 and 7.20 through 7.21 of the 2014 IRP.

As the planning cycle of the 2014 IRP included discussions with Parties regarding analysis of climate change risks and opportunities, NW Natural respectfully disagrees with Staff's recommendation that the Company "begin" such discussions and indeed believes it has taken a very proactive approach in its analysis of this issue in the 2014 IRP.

VIII. LINEAR PROGRAMMING AND RISK ANALYSIS

In regards to fulfilling an analysis of portfolio risk, Staff's Initial Comments state,

> "while NWN provided cost estimates for various portfolios based upon a certain weather standard, they did not provide 95 percent (or other) upper limits for those PVRRs, taking into account both weather variability and gas purchase price uncertainties."[36]

NW Natural contends that the portfolio evaluation adheres to the intent of the IRP Guideline by accounting for a possible divergence in basis differential at commodity purchasing hubs and the range of new interstate pipeline rates. The Company believes these are the greatest risks to the resource portfolio selection.

As Staff acknowledges in their comments, the approach to risk evaluation used by electric utilities is not meaningful in the context of a gas LDC where natural gas is the only fuel used. If gas costs are assumed to be high, an electric utility may choose to use different resources to generate electricity. For a gas utility, however, in any resource portfolio the utility will essentially use the same amount of gas. While the Company cannot substitute natural gas for another fuel, it can substitute the location of natural gas purchases and, over the long term, the pipelines used for natural gas transportation. Hence, the primary factor between gas costs across portfolios is *where* (i.e. which market hubs) gas is purchased from and how it is transported.

Using a historically derived distribution of gas costs at each basin will likely not reflect the most important commodity risks on a forward-looking basis. The Company sees a shift in basis differential at purchasing hubs as the most important commodity risk the Company faces on behalf of its customers. For example, the Company believes LNG exports may cause the Sumas price distribution to shift upwards relative to both the historic price distribution at Sumas as well as other purchasing locations. In this case, NW Natural believes it is best to use pricing scenarios to analyze the risk inherent in

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[36] Staff's Initial Comments, page 9.

different portfolios, as it has done in this IRP using alternative price forecasts obtained from IHS.[37]

Additionally, NW Natural contracted with Willbros to estimate a range of possible rates which the Company might expect to pay for new pipeline capacity on pipelines which do not currently exist.[38] Table 7.8 on page 7.26 of the IRP shows the range of portfolio costs given a distinct pricing scenario and at the low, mid, and high range of pipeline construction costs.

IX. GENERAL COMMENT ON THE PROCESS

NW Natural appreciates Parties' high level of engagement during this IRP process. The Company recognizes that every Party is managing heavy workloads given the number of filings in which they are involved. That said, the IRP process is a collaborative one and, as such, works best when recommendations can be fully discussed before the Commission issues its decision regarding the Company's Action Items. With this in mind, the Company is concerned about the time that it might have to respond to any new final recommendations from Staff. Given that Staff will file final recommendations on January 15th and Parties' comments on Staff's recommendations are due February 2nd, Parties have only 12 days in which to review and respond to Staff's recommendations. Additionally and as a practical matter, such a short timeframe eliminates any opportunity for other Parties to review any new analysis, and submit and receive responses to data requests that they might otherwise issue to Staff.

NW Natural recognizes the value of a thorough review and that individuals who ultimately review the filing may not have attended the relevant TWG meetings or other workshops. However, the Company believes the process in future IRPs would be benefitted by receiving Staff's (and other Stakeholder's) initial recommendations in their opening comments, recognizing that these recommendations could change with the final recommendations. This would provide the Company and other Stakeholders sufficient time to understand their recommendations and to potentially collaborate on options to the extent there are differences.

Conclusion

NW Natural's 2014 IRP complies with the guidelines established for IRPs and the Company requests the Commission's acknowledgement of its Plan as filed, subject to

[37] *See* IHS CERA Report, Appendix 7.

[38] *See* Willbros Report, Appendix 7.

the Action Plan modifications the Company proposes on pages 2, 13, and 14 of this document.

CERTIFICATE OF SERVICE

I hereby certify that I have this day served the foregoing NW NATURAL'S REPLY COMMENTS, upon all parties of record in the LC 60 proceeding, by electronic mail.

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DATED at Portland, Offregon, this 22nd day of December 2014.

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