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Subject description	Chapter (or location)	Re: Action plan item or IRP guideline	Staff Comment	Action required	Staff Initials
Sensitivities, Demand Scenarios and Model Runs	Ch. 5	• Guideline 1 "Substantive Requirements ," Subpart "c," Fourth bullet.[1] • Guideline 4 "Plan Components," Subpart "l." [2]	The Company has not performed a Monte Carlo simulation of the three portfolios[3] represented in NW Natural's 2011 Modified IRP based on simulations of weather patterns and natural gas prices.	Staff recommends not acknowledging NW Natural's 2011 Modified IRP, unless and until the Company performs a Monte Carlo simulation of the three portfolios represented in NW Natural's 2011 Modified IRP based on simulations of weather patterns and natural gas prices. As for weather patterns and natural gas prices, this analysis should address the Integrated Resource Planning Guidelines[4] by demonstrating that the selected portfolio balances cost and risk,[5] and represents the best combination of cost and risk for the utility and its customers. [6]	jdo
Demand and Load Forecasting	Ch. 2	Guideline 1: Substantive Requirements *At a minimum, Natural gas*	Staff does not agree with the design year weather pattern (85% colder than normal) augmented with the 3 day peak event late in the season and usage of	Evaluate changes in the system load caused by selecting several different weather patterns. Evaluate demand during swing time periods. Consider separating Coos Bay area as a separate demand	IP

[1] Guideline 1 "Substantive Requirements," Subpart "c," Fourth bullet: "The utility should explain in its plan how its resource choices appropriately balance cost and risk."

[2] Guideline 4 "Plan Components," Subpart "l": "At a minimum, the plan must include a selection of a portfolio that represents the best combination of cost and risk for the utility and its customers."

[3] The three scenarios represented in NW Natural's 2011 Modified IRP, Chapter 5, "Linear Programming and The Company Resource Choices," page 5.30, are: 1411-2011 IRP Mod Base Case, 1392-2011 IRP Mod PAL 100, and 1391-2011 IRP Mod PAL BB 50.

[4] IRP Guidelines adopted in Order No. 07-002 (as amended by Order No. 07-047) of Docket No. UM 1056:

[5] Guideline 1 "Substantive Requirements," Subpart "c," Fourth bullet: "The utility should explain in its plan how its resource choices appropriately balance cost and risk."

[6] Guideline 4 "Plan Components," Subpart "l": "At a minimum, the plan must include a selection of a portfolio that represents the best combination of cost and risk for the utility and its customers."

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		utilities should address the following sources of risk and uncertainty: demand (peak, swing and base-load), commodity supply and price, transportation availability and price, and costs to comply with any regulation of greenhouse gas emissions.	a peak dated to 1989. Staff did not notice any swing demand load mentioned in the IRP. Coos Bay area temperatures and housing characteristics are significantly different from Eugene.	center.	IP
Weather and Demand	Ch. 5	Guideline 4: Plan Components *b. Analysis of high and low*	IRP mentions on page 5.2 that load can be curtailed in the case of capacity constraint caused by an extreme weather event, but Staff could not	Update IRP with the requested value.	IP

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		load growth scenarios in addition to stochastic load risk analysis with an explanation of major assumptions; g. Identification of key assumptions about the future and alternative scenarios considered;	identify the critical temperature serving to potentially trigger such curtailment. Staff is not sure how NW Natural accounts for weatherization and insulation improvements to existing buildings; i.e., are they assigned to replacement and must be accounted for or are they assumed to be retrofit. Staff finds it logically inconsistent to use base case customer growth and base case gas usage growth for scenarios 1354 (Low gas price) and 1355 (High gas price). Staff has observed what appear to be anomalous data points in Figure 5.8 for the August and September Monte Carlo draws when compared with those in Figure 5.7.	Update IRP to include an explanation. IRP should have additional reasoning for this NW Natural modeling approach. Explain to Staff and consider option to split WA into two demand areas. Explain to Staff.	IP IP IP

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			Not a single modified model run among those listed on page 5.27 assumed low gas usage growth.		IP
Demand and Load	Ch.2	Guideline 10: Multi-state Utilities *Multi-state utilities should plan their gas supply and delivery on an integrated system basis that achieves a best cost/risk portfolio for all their retail customers.*	Growth in WA jurisdiction is anticipated to be significantly higher than in OR. Staff was unable to compare information from the states of Washington and Oregon serving to validate this statement as applicable over the relevant timeframe.	Provide demographic statistics and other assumptions, using internal and external sources, for the Vancouver metropolitan area and for Clark, Skamania, and Klickitat counties confirming the 2.7% annual rate of growth in the number of customers.	IP
Customer Number and Load Forecasting	Appendix 2.2 and 2.10		There is inadequate explanation provided to support the growth rates presented.	Provide details of the basis of the forecasts and then how it was used in SendOut Base Case: Please provide the following about these changes: 1. How does NWN plan to add 14,000 new residential	KZ

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				customers each year between 2011 and 2030? 2. Please explain how this growth will be divided among NWN's various operational areas. Low Growth Case 1. As with the base case, how does NWN plan to add 12,000 new residential customers each year between 2011 and 2030? 2. Also as with the base case explain how this growth will be divided among NWN's various operational areas.	
Customer Number and Load Forecasting	Run 1: 1411-2011 IRP Mod Base Case (page 5A.17)		Clarification required	Based on the Modified Base Resource plan the average annual growth rate in "Served Demand" (2011-2029) is 0.66%. Does NWN concur with value?	KZ
Customer Number and Load Forecasting	Run 1: 1411-2011 IRP Mod Base Case (page 5A.17)		Clarification required	Please explain the following: 1. The increase in forecasted "Served Demand" growth between 2013-2014 and 2018-2019. 2. The increase in forecasted "Served Demand" growth between 2018-2019 and 2023-2024 3. And increase again in forecasted "Served Demand" growth between 2023-2024 and 2028-2029. 4. In the explanation please include details on changes in "Demand Served" by customer class and by peak vs. non-peak times of the year.	KZ

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Customer Number and Load Forecasting Figure 2.12, page 2.17			Additional information needed for review	1. Has NWN performed an analysis of the cost differential in serving load without the extreme peak and related shoulder days (February 1989)? If so what are the results. If no, please explain why this was not done. 2. If the February 1989 peak is omitted from the analysis what would be the design day for this IRP?	KZ
Customer Number and Load Forecasting	Appendix 2.27, page 2A.31		For the PGA year 2011-2012 the IRP forecasts for Oregon are 653,760,000 (low customer growth) and 663,050,000 (high customer growth and gas breakthrough). This compares to 677,335,011 from the just completed 2011-2012 PGA review.	Please explain the reasons for these differences.	KZ
Customer Number and Load Forecasting	Run 1: 1411-2011 IRP Mod Base Case (page 5A.17)		In the "Resource Modeling" results tables the "Demand Served" for 2011-2012 is 732,430,000 (modified base case).	How does this compare to the "Total System Load Served" of 750,014,798 from the 2011-2012 October PGA filing by NWW? Please explain the reasons for the difference.	KZ
Mist Storage Recall	Run 1: 1411-2011 IRP Mod Base Case (page 5A.17) and		Staff needs additional information to complete analysis.	1. Please explain the new Mist recalls (modified base resource plan) beginning in 2012-2013, the 21 % increase in new Mist recalls in 2014-2015, and the 174 % increase in new Mist recalls beginning in 2015-2016. 2. Are the Mist recalls described in question #1	KZ

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	Ch 1 IV.B.1 page 1.8			intended to meet increases in winter (peak season) demand? 3. If the answer to question #2 is yes, please provide the winter (November – March) forecasted demand for each year of the IRP that justifies each such Mist recall. 4. If the answer to question #2 is no, what demand changes are the Mist recalls intended to meet? Please provide the analysis supporting this increased demand that is more appropriately met by Mist storage	
Storage	5.a, page 1.9; Table 3.3, page 3.6		Staff needs additional information to complete analysis.	1. What is the total annual storage capacity available for NWN Oregon core customers? 2. What daily deliverability is associated with this total capacity available for NWN Oregon core customers? 3. Please provide a table comparing the values from questions #1 and #2 with the actual capacity and deliverability from storage provided to NWN Oregon core customers during the prior ten winter seasons. 4. Please provide a table separating total storage capacity and deliverability available to NWN core customers by storage facility. 5. If the IRP contains explanations of the means and methods by which NWN determined the levels of storage capacity and deliverability needed by its core customers please point those out specifically. 6. If the IRP does not contain such explanations, please provide them now.	KZ

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Encana gas reserves	Page 3.8		Clarification requested	Please explain how the Encana gas reserves operate like a long-term physical and financial hedge, as indicated by this statement – "The joint venture with Encana serves an important role in the Company's overall portfolio because it operates somewhat like a long-term physical and financial hedge."	KZ
Natural Gas Price Forecasting	Figures 2.8 and 2.9, page 2.15 (for the Henry Hub only) Figures 5.9 and 5.10, page 5.22 (Rockies and AECO) Figure 5.13, page 5.28			1. Please provide a copy of the "base" and each alternative PNW gas price forecast utilized by NWN for the preparation of the modified IRP. These should be at least annual forecasts. 2. Please provide a copy of the "world descriptions" associated with each natural gas price forecast provided in response to question #1. 3. Current PNW natural gas price forecasts for 2011-2014 show the average price not rising above $4.21/Dth. Will NWN examine forecasts for these years and update the IRP results, and when will that occur? Will the Commission be informed of those results, when, and by what means? 4. Gas price forecasts for the IRP period have declined over the last several months. Will NNW update the IRP results to reflect these declines and their impacts on the IRP results? 5. If the answer to question #3 is yes, when is it estimated those updates will be available? 6. If the answer to question #4 is no, please explain. 7. At page 2.14 the IRP states, Figure 2.8 displays the price forecast used in this IRP." How can this be correct when Figure 2.8 provides forecasts for Henry Hub gas supply?	KZ

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Interstate Pipeline Capacity and Deliverability	Table 3.1, page 3.3		Additional data is required to complete review.	1. Please confirm that between NWPL and GTN NWN has purchased 467,356 of firm pipeline capacity. 2. If question #1 is confirmed, please provide the daily deliverability associated with this capacity. 3. If question #1 is not confirmed please provide the correct firm pipeline capacity value and associated deliverability. 4. Please confirm that NWN has purchased in total 157,039 of firm TCPL-BC capacity. 5. If question #4 is confirmed, please provide the daily deliverability associated with this capacity. 6. If question #4 is not confirmed please provide the correct firm pipeline capacity value and associated deliverability. 7. Please confirm that NWN has purchased in total 158,921 of firm TCPL-Alberta capacity. 8. If question #7 is confirmed, please provide the daily deliverability associated with this capacity. 9. If question #7 is not confirmed please provide the correct firm pipeline capacity value and associated deliverability. 10. Please identify the justification in the IRP for this level of firm pipeline capacity and daily deliverability. 11. If this justification is based on outside studies of firm transportation needs for NWN please provide copies of those studies. 12. If based on internal studies of firm transportation needs for NWN please provide copies of those studies.	KZ

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Palomar/Blue Bridge[7]			Additional information is required for staff to complete its review	1. Please explain in detail how the costs for the Palomar/Blue Bridge projects were estimated. 2. If these costs are estimated on a "real" basis please provide the inflation and discounting values applied by NWN. 3. If these costs are not estimated on a "real" basis please explain how such estimates are utilized in preparing the IRP and the final resource selection portfolios. 4. Please provide a copy of the construction schedule and the construction budget for both the Palomar and Blue Bridge projects.	KZ
Action Plan	Ch. 1 Pages 1.12 – 1.14		Additional detail is needed from the company for staff to complete its review of the action plan.	1. Please explain in detail 2.3 in the action plan. Particularly the word "support." 2. Please indicate how changes in price elasticity will be treated in the action plan. 3. Please provide the construction budgets and schedules for each section (as scheduled to come into service) of the Willamette Valley Feeder (WVF). (2.5) 4. Also with regard to the WVF provide an overview of the bidding process for construction as well copies of the actual RFB and each bid received in response. 5. Are upgrades to the capacity or deliverability of the Mist storage facility anticipated over the next two years? If so, when and provide copies of construction schedules and budgets along with all	KZ

[7] Run 10: 1391-2011 IRP Mod PAL BB 50; Run 11: 1392-2011 IRP Mod PAL 100; Run 14: 1414-2011 IRP Mod Canada Exp PAL; Run 15: 1415-2011 IRP Mod Sumas Exp PAL; Run 16: 1416-2011 IRP Mod Low Gas Fcst PAL BB 50, pages 5A.26 – 5A.30.

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				details regarding the bidding process related to the work. (2.2). 6. Please provide the final construction budget and schedule for the Harrisburg River Crossing project. Also, provide full details of the bidding processes involved with selecting contractors for this project. (4.2)	

This concludes Staff's Comments on NW Natural's Modified Integrated Resource Plan

Dated at Salem, Oregon, this 14th day of November, 2011.

Lori Koho

Lori Koho
Program Manager
Natural Gas Rates & Planning

CERTIFICATE OF SERVICE

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

Dated this 14th day of November , 2011 at Salem, Oregon

Kay Barnes

Kay Barnes
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Regulatory Operations
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