

# Appendix C

## Regulatory Compliance Matrix

Draft 2018 WA IRP

### Cascade Natural Gas IRP Review UG-171186

Rule	Requirement	Plan Citation	Notes
WAC 480-90-238(4)	Work plan filed no later than 12 months before next IRP due date.	Cascade filed the 2018 IRP Work Plan on December 11, 2017. An updated Work Plan was filed on April 27, 2018.	
WAC 480-90-238(4)	Work plan outlines content of IRP.	Contents of the IRP were outlined in the Work Plan.	
WAC 480-90-238(4)	Work plan outlines method for assessing potential resources. (See LRC analysis below)	Methods for assessing potential resources were outlined in the Work Plan.	
WAC 480-90-238(5)	Work plan outlines timing and extent of public participation.	Timing and extent of public participation were outlined in the Work Plan.	
WAC 480-90-238(4)	Integrated resource plan submitted within two years of previous plan.	Cascade has filed its 2018 draft IRP on October 5th, 2018. Cascade will file the final 2018 IRP on December 14th, 2018.	
WAC 480-90-238(5)	Commission issues notice of public hearing after company files plan for review.	<b>Pending</b>	
WAC 480-90-238(5)	Commission holds public hearing.	<b>Pending</b>	
WAC 480-90-238(2)(a)	Plan describes mix of natural gas supply resources.	Cascade describes supply side resources in Section 4. Cascade describes how it was applied to the Integrated Resource Plan in Section 8.	
WAC 480-90-238(2)(a)	Plan describes conservation supply.	Cascade describes conservation supply in Sections 7 throughout the section, with a specific definition on page 7-2.	
WAC 480-90-238(2)(a)	Plan addresses supply in terms of current and future needs of utility and ratepayers.	Cascade analyzes supply in terms of current and future needs in Section 3 by using demand forecasts.	
WAC 480-90-238(2)(a)&(b)	Plan uses lowest reasonable cost (LRC) analysis to select mix of resources.	With the use of SENDOUT® Cascade models alternative resources such as incremental transport, incremental supply, and incremental storage. After considering these factors, Cascade chooses the LRC Portfolio. This is discussed further in Section 8.	
WAC 480-90-238(2)(b)	LRC analysis considers resource costs.	Section 8 discusses resource costs for current as well as alternative Supply-Side Resources.	
WAC 480-90-238(2)(b)	LRC analysis considers market-volatility risks.	Using SENDOUT® Cascade was able to develop demand and price forecasts with effects of market-volatility on price. Low, expected, high, and carbon adders were analyzed. Monte Carlo simulations on prices were also done to stress test the preferred portfolio. This is discussed further in Section 8.	
WAC 480-90-238(2)(b)	LRC analysis considers demand side uncertainties.	In Section 3, uncertainty around future needs was analyzed by Demand Sensitivity Analysis.	
WAC 480-90-238(2)(b)	LRC analysis considers resource effect on system operation.	Please refer to Section 4 as well as Section 8.	
WAC 480-90-238(2)(b)	LRC analysis considers risks imposed on ratepayers.	Please refer to Supply-Side Uncertainties in Section 4.	
WAC 480-90-238(2)(b)	LRC analysis considers public policies regarding resource preference adopted by Washington state or federal government.	Please refer to Section 5. Section 5 discusses environmental considerations such as the I-1631 Ballot Initiative and the Social Cost of Carbon analysis.	
WAC 480-90-238(2)(b)	LRC analysis considers cost of risks associated with environmental effects including emissions of carbon dioxide.	Please refer to Section 5. Section 5 discusses environmental considerations such as the I-1631 Ballot Initiative and the Social Cost of Carbon analysis.	
WAC 480-90-238(2)(b)	LRC analysis considers need for security of supply.	Please refer to Sections 4 and 8.	
WAC 480-90-238(2)(c)	Plan defines conservation as any reduction in natural gas consumption that results from increases in the efficiency of energy use or distribution.	In Section 7 as well as in Appendix D, the Plan defines reduction in natural gas consumption that results from the installation of energy efficient equipment.	
WAC 480-90-238(3)(a)	Plan includes a range of forecasts of future demand.	Cascade developed a demand forecast at the Citygate and Citygate Loop level with different sensitivity analysis described in Section 3. Results of the long range forecast is located in Appendix B.	
WAC 480-90-238(3)(a)	Plan develops forecasts using methods that examine the effect of economic forces on the consumption of natural gas.	Using SENDOUT® Cascade was able to develop forecast with effects of economic forces on price. Low, expected, high, and carbon adders were analyzed. Monte Carlo simulations on prices were also done to stress test the preferred portfolio. This is discussed further in Section 8.	
WAC 480-90-238(3)(a)	Plan develops forecasts using methods that address changes in the number, type and efficiency of natural gas end-uses.	High and low load growth, which can be seen as an affect of changes in the number, type and efficiency of natural gas end-users, were analyzed in SENDOUT®. This is discussed further in Sections 3 and 8.	
WAC 480-90-238(3)(b)	Plan includes an assessment of commercially available conservation, including load management.	This is addressed in Section 7.	
WAC 480-90-238(3)(b)	Plan includes an assessment of currently employed and new policies and programs needed to obtain the conservation improvements.	This is addressed in Section 7.	
WAC 480-90-238(3)(c)	Plan includes an assessment of conventional and commercially available nonconventional gas supplies.	This is addressed in Section 7.	
WAC 480-90-238(3)(d)	Plan includes an assessment of opportunities for using company-owned or contracted storage.	Please refer to Section 4 as well as Section 8.	

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WAC 480-90-238(3)(e)	Plan includes an assessment of pipeline transmission capability and reliability and opportunities for additional pipeline transmission resources.	Please refer to Section 8 of the IRP.	
WAC 480-90-238(3)(f)	Plan includes a comparative evaluation of the cost of natural gas purchasing strategies, storage options, delivery resources, and improvements in conservation using a consistent method to calculate cost-effectiveness.	Please refer to Section 8 of the IRP.	
WAC 480-90-238(3)(g)	Plan includes at least a 10 year long-range planning horizon.	Yes, the plan includes a 20 year long-range planning horizon.	
WAC 480-90-238(3)(g)	Demand forecasts and resource evaluations are integrated into the long range plan for resource acquisition.	Demand forecasts, in Section 3 and Appendix B, are modeled in SENDOUT® to evaluate resources integrated into the long range plan for resource acquisition.	
WAC 480-90-238(3)(h)	Plan includes a two-year action plan that implements the long range plan.	Cascade describes a two-year action plan in Section 1, pages 1-12, as well as in Section 11, page 11-5.	
WAC 480-90-238(3)(i)	Plan includes a progress report on the implementation of the previously filed plan.	Cascade completed four quarterly updates as requested by WUTC in its 2016 IRP acknowledgement. These updates served as a progress report regarding the 2016 IRP action plan. Please refer to Appendix K for these updates.	
WAC 480-90-238(5)	Plan includes description of consultation with commission staff. (Description not required)	WUTC Staff was a member of Cascade's Technical Advisory Group (TAG). Cascade documents consultation with WUTC Staff in the public participation in Section 10 as well as Appendix A.	
WAC 480-90-238(5)	Plan includes description of completion of work plan. (Description not required)	Completed.	