

Appendix C  
Regulatory Compliance Matrix  
2023 WA IRP

## **Appendix C - Introduction**

The purpose of this document is to explicitly align Washington rulemakings with Cascade's response and plans to comply. As part of the IRP, Cascade followed the adopted rules and guidelines. In this Appendix, Cascade outlines the rules and guidelines as well as how the Company complied with each.

### Cascade Natural Gas IRP Review UG-220131

Rule	Statute (if Future Rule)	Requirement	Plan Citation
<a href="#">WAC 480-90-238(4)</a>		Work plan filed no later than 12 months before next IRP due date.	Cascade filed the initial workplan on February 25, 2022. An amendment was filed on September 19, 2022 to delay the final TAG meeting. On November 17, 2022 an updated workplan was filed to move the draft IRP filing date back one week.
<a href="#">WAC 480-90-238(4)</a>		Work plan outlines content of IRP.	Contents of the IRP were outlined in the Work Plan.
<a href="#">WAC 480-90-238(4)</a>		Work plan outlines method for assessing potential resources. (See LRC analysis below)	Methods for assessing potential resources were outlined in the Work Plan.
<a href="#">WAC 480-90-238(5)</a>		Work plan outlines timing and extent of public participation.	Timing and extent of public participation were outlined in the Work Plan.
<a href="#">WAC 480-90-238(4)</a>		Integrated resource plan submitted within two years of previous plan.	Cascade filed the previous IRP on February 26, 2021. Cascade is on schedule to file the current IRP on or before February 24, 2023.
<a href="#">WAC 480-90-238(5)</a>		Commission issues notice of public hearing after company files plan for review.	<i>Pending</i>
<a href="#">WAC 480-90-238(5)</a>		Commission holds public hearing.	<i>Pending</i>
<a href="#">WAC 480-90-238(2)(a)</a>		Plan describes mix of natural gas supply resources.	Cascade described supply side resources in Chapter 4 as well as Chapter 6. Cascade described how it was applied to the Integrated Resource Plan in Chapter 9.
<a href="#">WAC 480-90-238(2)(a)</a>		Plan describes conservation supply.	Cascade describes energy efficiency supply in Chapter 7.
<a href="#">WAC 480-90-238(2)(a)</a>		Plan addresses supply in terms of current and future needs of utility and ratepayers.	Cascade analyzed supply in terms of current and future needs in Chapter 3 through the demand forecast and Chapter 9 through resource integration.
<a href="#">WAC 480-90-238(2)(a)&amp;(b)</a>		Plan uses lowest reasonable cost (LRC) analysis to select mix of resources.	With the use of PLEXOS® Cascade modeled alternative resources such as Satellite LNG, incremental transport, incremental supply, incremental storage, as well as carbon compliance options. After considering these factors, Cascade chose the LRC Portfolio (Preferred Portfolio). This is discussed further in Chapter 9.
<a href="#">WAC 480-90-238(2)(b)</a>		LRC analysis considers resource costs.	Chapter 4 discusses resource costs for current as well as alternative Supply-Side Resources.
<a href="#">WAC 480-90-238(2)(b)</a>		LRC analysis considers market-volatility risks.	Cascade analyzed market volatility risks by incorporating 200 random draws of different demand and pricing profiles. These 200 draws were inputs into Cascade's PLEXOS® model, where it optimized the model and provided any risk concerns. Monte Carlo information will be provided in TAG 6 as well as in the final IRP.
<a href="#">WAC 480-90-238(2)(b)</a>		LRC analysis considers demand side uncertainties.	In Chapter 3, uncertainty around future needs was analyzed by Demand Sensitivity Analysis.
<a href="#">WAC 480-90-238(2)(b)</a>		LRC analysis considers resource effect on system operation.	Please refer to Chapter 4 as well as Chapter 9.
<a href="#">WAC 480-90-238(2)(b)</a>		LRC analysis considers risks imposed on ratepayers.	Please refer to Supply-Side Uncertainties in Chapter 4. Cascade has also provided an Appendix K, which is a bill impact analysis.
<a href="#">WAC 480-90-238(2)(b)</a>		LRC analysis considers public policies regarding resource preference adopted by Washington state or federal government.	Please refer to Chapter 6. Chapter 6 discusses environmental policy such as Social Cost of Carbon and Climate Commitment Act discussions.
<a href="#">WAC 480-90-238(2)(b)</a>		LRC analysis considers cost of risks associated with environmental effects including emissions of carbon dioxide.	Please refer to Chapter 6. Chapter 6 discusses environmental policy such as Social Cost of Carbon and Climate Commitment Act discussions.
<a href="#">Natural gas IRP rulemaking planned for Phase I of the 2019-2022 Energy Legislation Implementation Plan will begin Q2 2020.</a>	<a href="#">RCW 80.28.395</a>	Plan includes cost of greenhouse gas emissions resulting from the use of natural gas, including the effect of emissions occurring in the gathering, transmission, and distribution of natural gas to the end user.	Cascade included costs of greenhouse gas emissions established in RCW 80.28.295 in the final filing of the IRP.

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<a href="#">Natural gas IRP rulemaking planned for Phase I of the 2019-2022 Energy Legislation Implementation Plan will begin Q2 2020.</a>	<a href="#">RCW 80.28.395</a>	<p>Plan considers cost of greenhouse gas emissions equal to the cost per metric ton of carbon dioxide emissions, using the two and one-half percent discount rate, listed in table 2, Technical Support Document: Technical update of the social cost of carbon (SCC) for regulatory impact analysis under Executive Order 12866, published by the interagency working group on social cost of greenhouse gases of the United States government, August 2016.</p> <p><b>Note:</b> The commission adjusted the SCC to reflect the effect of inflation: <a href="https://www.utc.wa.gov/regulatingIndustries/utilities/Pages/SocialCostofCarbon.aspx">https://www.utc.wa.gov/regulatingIndustries/utilities/Pages/SocialCostofCarbon.aspx</a></p>	Cascade utilized Social Cost of Carbon with two and one-half percent discount rate to account for the cost of carbon.
<a href="#">WAC 480-90-238(2)(b)</a>		LRC analysis considers need for security of supply.	Please refer to Chapter 4 and 9. The Action Plan also describes Cascade's need for security of supply.
<a href="#">WAC 480-90-238(2)(c)</a>		Plan defines conservation as any reduction in natural gas consumption that results from increases in the efficiency of energy use or distribution.	In Chapter 7 as well as in Appendix D, the Plan defines reduction in natural gas consumption that results from the installation of energy efficient equipment.
<a href="#">WAC 480-90-238(3)(a)</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.
<a href="#">WAC 480-90-238(3)(a)</a>		Plan develops forecasts using methods that examine the effect of economic forces on the consumption of natural gas.	Using PLEXOS® Cascade was able to develop forecast with effects of economic forces on price. Monte Carlo simulations on price and demand to stress test the top-ranked candidate portfolio. Monte Carlo results can be found in Appendix G.
<a href="#">WAC 480-90-238(3)(a)</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 PLEXOS®. This is discussed further in Chapters 3 and 9.
<a href="#">WAC 480-90-238(3)(b)</a>		Plan includes an assessment of commercially available conservation, including load management.	This is addressed in Chapter 7.
<a href="#">WAC 480-90-238(3)(b)</a>		Plan includes an assessment of currently employed and new policies and programs needed to obtain the conservation improvements.	This is addressed in Chapter 7.
<a href="#">WAC 480-90-238(3)(c)</a>		<p>Plan includes an assessment of conventional and commercially available nonconventional gas supplies.</p> <p>When assessing nonconventional gas supplies, plan may consider appropriateness of renewable natural gas resource development to support a smooth transition to a low carbon energy economy in Washington (see <i>RCW 80.28.380 - Findings</i>).</p>	This is addressed in Chapter 7.
<a href="#">WAC 480-90-238(3)(d)</a>		Plan includes an assessment of opportunities for using company-owned or contracted storage.	Please refer to Chapter 4 as well as Chapter 9.
<a href="#">WAC 480-90-238(3)(e)</a>		Plan includes an assessment of pipeline transmission capability and reliability and opportunities for additional pipeline transmission resources.	Please refer to Chapter 9 of the IRP.
<a href="#">WAC 480-90-238(3)(f)</a>		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 Chapter 9 of the IRP.

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<a href="#">Conservation rulemaking to adopt natural gas energy efficiency rules planned for Phase I of the 2019-2022 Energy Legislation Implementation Plan will begin Q2 2020.</a>	<a href="#">RCW 80.28.380</a>	Plan identifies all conservation measures that are available and cost-effective that must be subsequently acquired by the company.	Please refer to Chapter 7 of the IRP.
<a href="#">Conservation rulemaking to adopt natural gas energy efficiency rules planned for Phase I of the 2019-2022 Energy Legislation Implementation Plan will begin Q2 2020.</a>	<a href="#">RCW 80.28.380</a>	Plan's cost-effectiveness analysis includes costs of greenhouse gas emissions established in RCW 80.28.295 (see rows 21 & 22)	Cascade included costs of greenhouse gas emissions established in RCW 80.28.295 in the final filing of the IRP.
<a href="#">Conservation rulemaking to adopt natural gas energy efficiency rules planned for Phase I of the 2019-2022 Energy Legislation Implementation Plan will begin Q2 2020.</a>	<a href="#">RCW 80.28.380</a>	Plan includes a conservation potential assessment prepared by an independent third party.	Please refer to Appendix D of the IRP.
<a href="#">WAC 480-90-238(3)(g)</a>		Plan includes at least a 10 year long-range planning horizon.	Yes, the plan includes a 28 year long-range planning horizon.
<a href="#">WAC 480-90-238(3)(g)</a>		Demand forecasts and resource evaluations are integrated into the long range plan for resource acquisition.	Demand forecasts, in Chapter 3 and Appendix B, are modeled in PLEXOS® to evaluate resources integrated into the long range plan for resource acquisition.
<a href="#">WAC 480-90-238(3)(h)</a>		Plan includes a two-year action plan that implements the long range plan.	Cascade included a two-year action plan in Chapter 11.
<a href="#">WAC 480-90-238(3)(i)</a>		Plan includes a progress report on the implementation of the previously filed plan.	Cascade included a progress report in Chapter 1.
<a href="#">WAC 480-90-238(5)</a>		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 Chapter 10 as well as Appendix A.
<a href="#">WAC 480-90-238(5)</a>		Plan includes description of completion of work plan. (Description not required)	Completed.