

Development of Cost Test Rules to Support Implementation of Decarbonization Act

Technical Conference #2 Washington UTC Docket U-240281

December 13, 2024

Consulting Team to the WA Utilities & Transportation Commission: Tim Woolf and Courtney Lane, Synapse Energy Economics Julie Michals, E4TheFuture

Virtual Workshop Reminders

- This is a public workshop. The presentation will be recorded and posted.
- MUTE your microphone when you're not speaking



- Use chat to ask clarifying questions during the presentation
- Use chat or raise hand to speak during Q & A



Today's Agenda

Staff - Update on Draft ISP Rules

- Comments received from stakeholders
- Draft proposals from UTC staff
- Q & A

PSE - Presentation on evaluating resources and portfolios

- Current planning process
- Q & A

Consultants - Outline of Draft Cost Test

- Application of the Cost Test in the context of the ISP process
- Impacts included in the Cost Test
- Additional guidance from the Commission
- Q & A

Staff - Next Steps

• Workshop #3 on January 9, 2025





ISP rulemaking updates

Payton Swinford

Impact of Initiative-2066

Repealed Sections of the Decarbonization Act:

- HB 1589 Sec. 7: Mandating gas assets to be fully depreciated by 2050, allows IOUs to merge electric and gas rate bases
- HB 1589 Sec. 8: Banning incentives for customer purchases of gas equipment, mandating the IOU to educate customers about availability of electrification incentives
- HB 1589 Sec. 10: Relating to targeted electrification coordination with COUs
- Other line-item repeals relating to electrification requirements

New Language In statute:

- Clarification of obligation to serve gas
- Prohibits the Commission from approving a rate plan that incentivizes termination of gas service or restrict access/implement planning requirements that make gas service cost-prohibitive.
- Other new language relating to building code requirementsrelevance is outside the scope of this rulemaking.

Timeline of Public Engagement Events

- June 25: 1st Public Workshop for feedback on scoping of integrated system plan rules.
- September 20: Release of 1st draft of rules for comment
- October 11: Cost Test Technical Conference #1
- October 25: Draft Rules Public Workshop
- December 13: Cost Test Technical Conference #2 (originally Nov. 22)

Upcoming:

- January 9: Cost Test Technical Conference #3
- Mid January-Mid February 2025: Public Engagement period for Draft Rules with the cost test and I-2066 impacts incorporated
- Q2 2025: Request for Comments on Final round of informal draft rules.



Highlights of Technical Comments Received

Content of an ISP:

- Gas/Electric Integration: Rules should more explicitly require the utility to capture the interaction of gas and electric systems so that vulnerable customers are more protected against the effects of unclear or generic forecasting and modeling.
- Assessments: Various assessments required for energy resource options in Long-Term Planning (e.g., DERs, energy storage, EV infrastructure, NPAs, etc.) should occur prior to scenario development to fully understand new resource potential. Clarity needed:
 - Long-Term Section: More structure is needed for meeting multiple statutory requirements (Clean Energy Transformation Act, Climate Commitment Act, Energy Independence Act, Decarbonization Act) and request for the Climate Commitment Act (CCA) to be more explicitly integrated alongside the Clean Energy Transformation Act (CETA).
 - Implementation Section: Clarity is needed regarding CETA requirements and the more explicit integration of CCA requirements.

Highlights of Technical Comments Received, continued

Definition of Commercially Feasible

- "Commercially feasible" v. "achievable": Some understand it as similar; differences between the two are understood through the process of development.
- Clarity needed: On the usage of "commercially feasible" in ISP.

Public Participation Groups:

- Utility Advisory Groups: Concerns about the makeup and decision-making scope of advisory groups; request additional language in 480-100-655 on requirements and adding oversight authority to the Commission.
- Process: Should be streamlined, comprehensive, and easily accessible to a broad audience.
- Community Engagement: More intentional engagement with Tribal groups throughout the planning process is vital.



Staff Update on Comments

- Content of an ISP:
 - Staff agrees the rules should more explicitly capture the interaction of gas and electric systems.
- The next round of draft ISP rules will have sections reorganized for easier readability, proposed changes to address comment themes, and changes to reflect the impacts of I-2066.





Staff Cost Test Overview

Wesley Franks & Jennifer Snyder

Cost Test Purpose

Determining the lowest reasonable cost at the portfolio level



Cost Test Statutory Direction

The commission shall establish by rule a cost test for...to comply with state clean energy and climate policies.

.... for the purpose of

determining the lowest reasonable cost

of decarbonization and low-income electrification measures in integrated system plans,

at the portfolio level,

and for any other purpose determined by the commission by rule.

RCW 80.86.020 (10), as modified by I-2066



"Lowest reasonable cost" Definition

- Means lowest cost mix of...
 - demand-side and supply side resources and decarbonization measures determined through,
 - a detailed and consistent analysis of a wide range of commercially available resources and measures.
- Analysis must consider (at minimum): long-term costs and benefits, market-volatility risks, resource uncertainties, resource dispatchability, resource effect on system operation, the risks imposed on the large combination utility and its ratepayers, public policies regarding resource preference adopted by Washington state or the federal government, the cost of risks associated with environmental effects including potential spills and emissions of carbon dioxide, and the need for security of supply.
- Analysis of the lowest reasonable cost must describe the large combination utility's combination of planned resources and related delivery system infrastructure in compliance with chapters 19.280, 19.285, and 19.405 RCW.



Lowest Reasonable Cost & Cost-Effectiveness



Cost-effective (CE)

- Pursue all CE electric efficiency
 - (EIA and CETA)
- Achieve all CE gas efficiency
 - (RCW 80.28.380)
- Pursue all CE electric demand response
 - (CETA)
- Other DERs
 - (Standard practice)

Lowest Reasonable Cost

Resource need of the utility must be met by finding the lowest reasonable cost mix of resources on a portfolio level

Includes requirements for all cost-effective EE, DR, and planning constraints imposed by other policies



Other constraints

- Achieve 2% of electric load with efficiency and demand response 10% of winter and summer peak demand
 - Unless the Commission finds more CE or not enough commercially feasible
- Planning constraints to achieve standards
 - (CETA, CCA, NERC, WRAP, etc.)



Differing Definitions of "Cost-effective"

- Under RCW 80.86.010 (5), "Cost-effective" means that a project or resource is, or is forecast to:
 - (a) Be reliable and available within the time it is needed; and
 - (b) reduce greenhouse gas emissions and meet or reduce the energy demand or supply an equivalent level of energy service to the intended customers at an estimated long-term incremental system cost no greater than that of the least-cost similarly reliable and available alternative project or resource, or any combination thereof, including the cost of compliance with chapter 70A.65 RCW, based on the forward allowance ceiling price of allowances approved by the department of ecology under RCW 70A.65.160.
- Under RCW 80.52.30, "Cost-effective" means that a project or resource is forecast:
 - (a) To be reliable and available within the time it is needed; and
 - (b) To meet or reduce the electric power demand of the intended consumers at an estimated incremental system cost no greater than that of the least-cost similarly reliable and available alternative project or resource, or any combination thereof.
- Under RCW 80.28.380 (1), a cost-effectiveness analysis must include the costs of greenhouse gas emissions established in RCW 80.28.395.

Cost-effectiveness discussion to continue

- Straw proposal for a Washington cost-effectiveness test for DERs (as developed in Docket UE-210804) referred to as a starting place for the ISP cost test
- Work to develop this "jurisdictional cost test" for all DERs will recommence after this rulemaking
 - Specific to DERs
 - Applicable to all Washington state IOUs
 - Aligns with Washington state's DER policy goals

Cost Test Uses

Emissions reduction measures, decarbonization and low-income electrification measures, and any other purpose determined by the commission by rule.



Cost Test Statutory Direction

The commission shall establish by rule a cost test for emissions reduction measures

...to comply with state clean energy and climate policies.
.... for the purpose of determining the lowest reasonable cost of decarbonization and low-income electrification measures in integrated system plans, at the portfolio level, and for any other purpose determined by the commission by rule.

RCW 80.86.020 (10) as modified by I-2066

Emissions reduction measures should not be treated differently than other resources

Emissions reduction measures

- Energy efficiency
- Renewable natural gas
- Small modular reactors
- Distributed solar
- Utility scale solar
- Other resources that reduce emissions

A lowest reasonable cost portfolio

- meets all standards required by law
- includes CCA costs
- incorporates the SCGHG
- incorporates long term costs and benefits



Staff's Views

- 1. A portfolio level cost test to determine lowest reasonable cost should apply to all resources.
- 2. Any cost test must also look at benefits.
- 3. A cost test must adequately evaluate competing questions required to evaluate lowest reasonable cost.
- 4. A cost test may need to be a framework consisting of more than one test to more effectively help a large combination utility and the Commission more transparently evaluate ISP portfolios.
- 5. Cost test rules must provide flexibility
- 6. Additional guidance can come from orders, advisory groups, etc.

The Commission must evaluate if an ISP is in the public interest & includes:

- (a) The equitable distribution and prioritization of energy benefits and reduction of burdens to vulnerable populations, highly impacted communities, and overburdened communities;
- (b) Long-term and short-term public health, economic, and environmental benefits and the reduction of costs and risks;
- (c) Health and safety concerns;
- (d) Economic development;
- (e) Equity;
- (f) Energy security and resiliency;

• Continued from previous slide

The Commission must evaluate if an ISP is in the public interest & includes:

- (g) Whether the integrated system plan:
- (i) Would achieve a proportional share of reductions in greenhouse gas emissions for each emissions reduction period on the gas and electric systems;
- (ii) Would achieve the energy efficiency and demand response targets in subsection (4)(e) and (g) of this section;
- (iii) Would achieve cost-effective electrification of end uses as required by subsection (4)(h) of this section;
- (iii) Results in a reasonable cost to customers, and projects the rate impacts of specific actions, programs, and investments on customers;
- (iv) Would maintain system reliability and reduces long-term costs and risks to customers;
- (vi) Would lead to new construction career opportunities and prioritizes a transition of natural gas and electricity utility for workers to perform work on construction and maintenance of new and existing renewable energy infrastructure; and
- (vii) Describes specific actions that the large combination utility plans to take to achieve the requirements of the integrated system plan.



A Cost Test must answer multiple questions:



How well does a portfolio represent the lowest cost mix of demand-side and supply side resources needed for the utility to meet its clean energy transformation standards?



Does a portfolio adequately consider long- term costs and benefits, etc. from LRC definition?



How is a portfolio of resources forecasted to impact how much customers pay?



How equitably does a portfolio distribute benefits?



Feedback and questions for Staff

As a reminder – Staff does not speak for the Commission. This presentation contains the informal opinions of Commission Staff, offered as technical assistance in developing rules, and is not intended as legal advice. We reserve the right to amend these opinions should circumstances change or additional information be brought to our attention. Staff's opinions are not binding on the Commission.

Lowest reasonable cost in Integrated planning

Docket U-240281 – 2nd Cost Test Technical Conference

December 13, 2024



Lowest reasonable cost: pre-existing requirements



Electric IRP & CETA

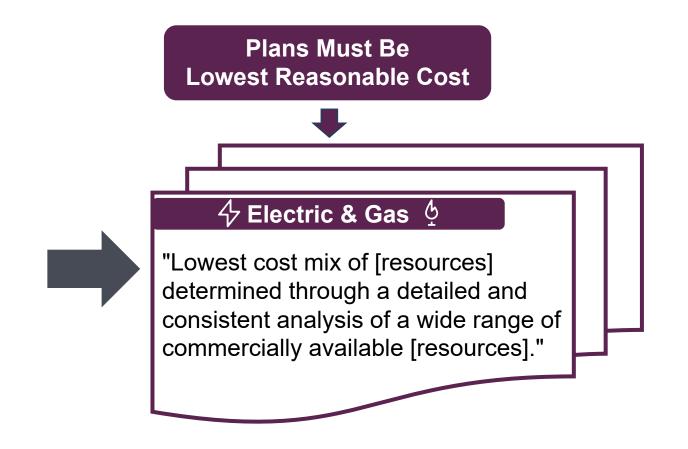
Statutes/Rules (& RFP Rules)

- RCW: 19.280, 19.405
- WAC: 480-100 (& 480-107)

Gas Planning

Gas IRP Rules (no Gas IRP statute)

• WAC: 480-90-238



"At a minimum, this analysis must consider resource cost, market-volatility risks, demand-side resource uncertainties, resource dispatchability, resource effect on system operation, the risks imposed on the utility and its customers, public policies regarding resource preference adopted by WA or the federal gov't, and the cost of risks associated with environmental effects, including emissions of CO₂."

Lowest reasonable cost: pre-existing planning processes

Electric & *Levelized costs of measures based on Total Resource Cost. **Electric Only** Gas** consistent with the Council Methodology **Electric and Gas IRPs conducted separately Conservation Potential Assessment Inputs: (CPA)* **Optimized portfolio:** Load Forecast(s) Resource acquisitions Commodity **Flexibility** & retirements **Prices** Lowest **Portfolio** Hydro conditions Analysis Utility customer costs Reasonable **Optimization PSEs** current **GHG** emissions costs Resource Cost Portfolio model resources **Equity Analysis** Adequacy Future generic resources Electric **CBI** Portfolio Etc. Regional Power Benefit Analysis Price Model (23 EPR)



- Update for resource acquisitions
- Add DER concepts
- Update model assumptions



Lowest reasonable cost: 2023 electric progress report

Table 3.4: Long-term (21-year) Net Present Values — 2024–2045 (\$B)

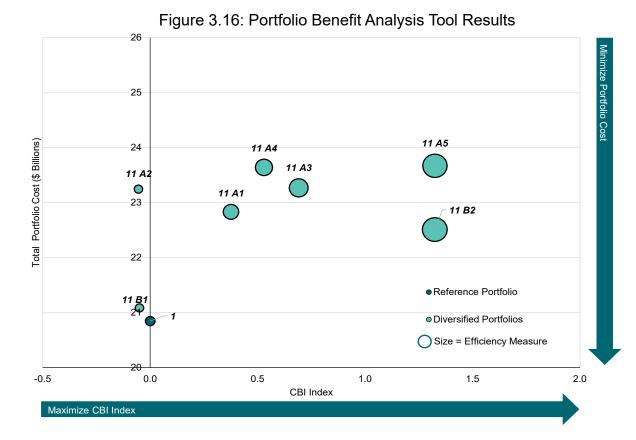
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Portfolio	Portfolio Cost with SCGHG	Portfolio Cost without SCGHG	Social Cost of Greenhouse Gases (SCGHG)
Reference	17.61	20.85	3.24
11 A1	20.01	22.83	2.82
11 A2	20.32	23.25	2.93
11 A3	20.44	23.27	2.83
11 A4	20.74	23.64	2.90
11 A5	20.89	23.67	2.78
11 B1	18.09	21.09	3.00
11 B2 (Preferred Portfolio)	19.56	22.51	2.95
	_		

Table 3.2: Portfolio CBI Metrics

Rev. Req.

Societal Cost

CBI Metric	1 Reference	11 A5 Diversified Portfolio	11 B2 Diversified Portfolio
Cost (\$, Billions)	20.85	23.67	22.51
GHG Emissions (Short Tons)	48,824,734	41,543,008	44,372,601
SO ₂ Emissions (Short Tons)	28,841	28,836	28,759
NO _x Emissions (Short Tons)	11,426	10,307	10,805
PM Emissions (Short Tons)	9,036	8,873	8,940
Jobs (Total)	45,736	40,757	43,795
Energy Efficiency Added (MW)	695	818	818
DR Peak Capacity (MW)	291	320	320
DER Solar Participation (Total New Participants)	12,115	83,903	87,492
DR Participation	513,238	750,943	750,943
(Total New Participants)			
DER Storage Participation (Total New Participants)	8,125	18,524	18,524





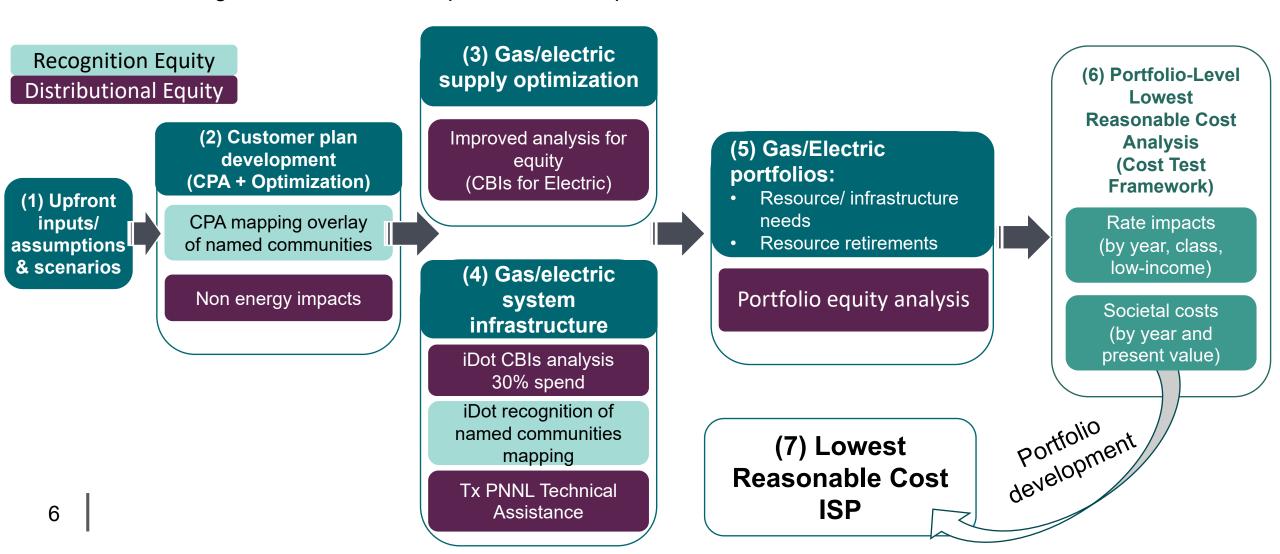
ISP lowest reasonable cost – basic outline

Portfolio: expanded definition to include gas/electric energy supply, gas/electric system infrastructure and gas/electric customer plans – the full 'portfolio'

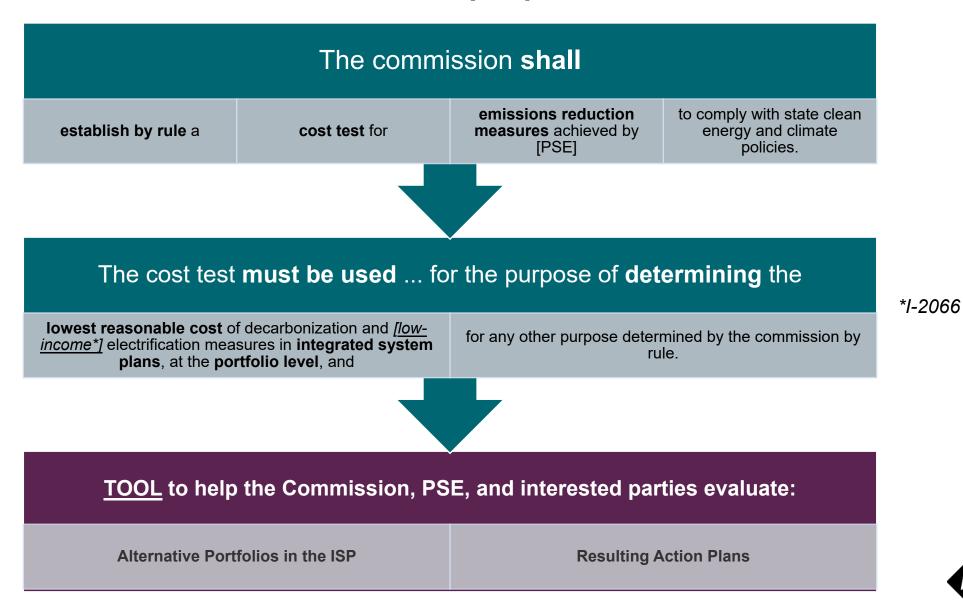
*Note – the electric/gas supply process is very similar to the prior IRP process (6) Portfolio-Level **Lowest Reasonable** (3)**Cost Analysis** Gas/electric (5) Gas/Electric (Cost Test Framework) supply **Portfolios:** (2) Customer Rate impacts (1) Upfront optimization Resource/ plan (by year, class, lowinputs/ infrastructure development income) assumptions & (4) (CPA+ needs scenarios Gas/electric Resource Optimization) Societal costs system retirements (by year and infrastructure present value) Portfolio development (7) Lowest **Reasonable Cost** ISP

ISP lowest reasonable cost – with evolved equity analysis

Portfolio: expanded definition to include gas/electric energy supply, gas/electric system infrastructure and gas/electric customer plans – the full 'portfolio'



Cost test in RCW 80.86.020(10)





Cost Test Concept

Question: Conceptually, how do UTC, PSE, and others perform a "test" to determine "the

lowest reasonable cost of decarbonization and [low-income] electrification

measures in integrated system plans, at the portfolio level"?

Concept: By looking at portfolios with incrementally more decarbonization/ electrification

and comparing portfolio-level utility customer costs (rate impacts) to portfolio-

level societal costs (including GHG).

Builds on pre-existing planning practices at PSE and elsewhere of selecting portfolio largely based on minimizing present value of revenue requirements (PVRR) and PV of societal costs (PVSC).

By adding bill impacts to analysis, also helps assess RCW 80.86.020 public-interest requirements:

- Whether the ISP results in a reasonable cost to customers, and projects the rate impacts of specific actions, programs, and investments on customers
- The equitable distribution and prioritization of energy benefits and reduction of burdens



Overview of Consultant Team Proposed Cost Test



Overview of the Cost Test Rules

The Cost Test Rules will include two key elements:

- 1. A description of how the Cost Test should be applied in the context of the ISP
- 2. A list of impacts that should be included in the Cost Test

The Cost Test rules will be high-level to allow for flexibility in implementation

- They will be general enough to be applicable to current planning practices
- They will also be general enough to allow for evolutions in planning practices

The Commission will provide additional guidance on how to implement the rules

- In the Adoption order
- In orders regarding ISPs
- In other forums, as warranted



Application of the Cost Test rules in the ISP

The Cost Test rules will explain generally how the test should be applied in the context of the ISP process.

For example:

- The Cost Test will be applied to demonstrate that preferred resource portfolios in the ISP are at the lowest reasonable cost, as per RCW 80.86.020(10)
- The Cost Test will be applied to demonstrate that the ISP is in the public interest, for the purpose of Commission review and approval of the ISP, as per RCW 80.86.020(12)
- The Cost Test will be applied to both electric and gas utility planning practices
- The Cost Test will be applied to both short-term and long-term planning processes
- The Cost Test should be applied consistently to each portfolio



Impacts Included in the Cost Test

The Cost Test will include all the impacts necessary to demonstrate that the preferred portfolio is lowest reasonable cost and that the ISP is in the public interest.

This includes the following impacts:

- Utility system impacts, both electric and gas
- CO2 emissions
- Environmental impacts
- Health and safety concerns
- Reliability
- Resilience
- Security of supply
- Economic development
- Rate impacts
- Bill impacts
- Equity impacts
- Other fuels



Adoption Order to the Cost Test Rules

The adoption order accompanying the Cost Test rules will address some of the issues regarding implementation of the rules. For example:

- Demonstration of lowest reasonable cost standard
- Demonstration of the public interest standard for Commission review of plans
- Integration of gas and electric resources
- Relevance of the cost-effectiveness requirements
- Application of the cost test rule in the short-term planning process
- Application of the cost test rule in the long-term planning process
- Accounting for equity
- Accounting for rate and bill impacts
- Use of customer benefit indicators

The adoption order will provide guidance focused on the next ISP filing.

Additional guidance might be provided in future Commission orders



Questions and Answers



Thank you!

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Julie Michals – <u>jmichals@e4thefuture.org</u>



Next Steps

Jennifer Snyder

Next Steps

Draft Cost Test rules sent by Dec 20.

Opportunity for written comments on Cost Test rules and this technical conference by Jan 10.

Cost Test Technical Conference #3 on Jan 9.

Feedback on draft Cost Test Rules Areas where further guidance is needed:

- from the Commission
- from an advisory group

Other topics as needed

Date	Event	
June 28, 2024	First ISP Rules Workshop	
September 20, 2024	Draft ISP Rules - Integrated System Plan posted to docket; notice of opportunity to comment	
October 11, 2024	Cost Test Technical Conference #1	
October 25, 2024	Second ISP Rules Workshop	
December 13, 2024	Cost Test Technical Conference #2	
January 9, 2024	Cost Test Technical Conference #3	
Mid Jan-Mid Feb 2025	Public engagement period on 2 nd Draft ISP Rules incorporating feedback and I-2066	
Early Q2 2025	Informal Draft Rules (ISP & Cost Test) for Comment	
Sept 29, 2025	New Statutory Rulemaking Deadline	





Appendix



Commission Approval of an ISP

The commission must evaluate whether the plan is in the public interest, and includes the following:

- (a) The equitable distribution and prioritization of energy benefits and reduction of burdens to vulnerable populations, highly impacted communities, and overburdened communities;
- (b) Long-term and short-term public health, economic, and environmental benefits and the reduction of costs and risks;
- (c) Health and safety concerns;
- (d) Economic development;
- (e) Equity;
- (f) Energy security and resiliency;
- (g) Whether the integrated system plan:
 - (i) Would achieve a proportional share of reductions in greenhouse gas emissions for each emissions reduction period on the gas and electric systems;
 - (ii) Would achieve the energy efficiency and demand response targets in subsection (4)(e) and (g) of this section;
 - (iii) Would achieve cost-effective electrification of end uses as required by subsection (4)(h) of this section;
 - Achieve all cost-effective electrification of end uses currently served by natural gas identified through an assessment of alternatives to known and planned gas infrastructure projects, including non-pipeline alternatives, rebates and incentives, and geographically targeted electrification
 - (iv) Results in a reasonable cost to customers, and projects the rate impacts of specific actions, programs, and investments on customers;
 - (v) Would maintain system reliability and reduces long-term costs and risks to customers;
 - (vi) Would lead to new construction career opportunities and prioritizes a transition of natural gas and electricity utility workers
 - (vii) Describes specific actions that the large combination utility plans to take



Cost Test Rules

The Cost Test rule requirement is embedded within the ISP Rules

Section RCW 80.86.020(10) requires:

The commission shall establish by rule a **cost test** for

- emissions reduction measures achieved by large combination utilities
- to comply with state clean energy and climate policies
- ...for the purpose of determining the **lowest reasonable cost** of decarbonization and electrification measures in integrated system plans, **at the portfolio level**, and
- for any other purpose determined by the commission by rule.



Key Definition: Lowest Reasonable Cost

The **lowest cost mix** of **demand-side** and **supply side** resources and **decarbonization**_measures determined through a detailed and consistent analysis of a **wide range** of **commercially available** resources and measures.

At a minimum, this analysis must consider **long-term** costs and benefits, market-volatility **risks**, resource **uncertainties**, resource **dispatchability**, resource effect on **system operation**, the **risks** imposed on the large combination utility and its ratepayers, **public policies regarding resource preference** adopted by Washington state or the federal government, the cost of **risks** associated with **environmental effects** including potential spills and emissions of **carbon dioxide**, and the need for **security of supply**.

The analysis of the lowest reasonable cost must describe the large combination utility's combination of planned resources and related delivery system infrastructure in compliance with chapters 19.280, 19.285, and 19.405 RCW.



Key Definition: Cost-Effective

Cost-effective means that a project or resource is, or is forecast to:

- (a) be **reliable and available** within the time it is needed; and
- (b) **reduce greenhouse gas emissions** and **meet or reduce the energy demand or supply** an equivalent level of energy service to the intended customers
- at an estimated **long-term incremental system cost** no greater than that of the least-cost similarly reliable and available <u>alternative project or resource</u>, or any combination thereof,
- including the **cost of compliance** with chapter 70A.65 RCW, based on the forward allowance ceiling price of allowances approved by the department of ecology under RCW 70A.65.160



Key Definition: System Cost

System cost means actual direct costs or an estimate of all direct costs of a project or resource over its effective life including, if applicable:

The costs of **transmission** and **distribution** to the customers;

waste disposal costs;

permitting, siting, mitigation, and end-of-cycle decommissioning and remediation costs;

fuel costs, including projected increases;

resource integration and balancing costs; and

such quantifiable **environmental** costs and benefits and other **energy and nonenergy benefits** as are directly attributable to the project or resource, including **flexibility**, **resilience**, **reliability**, **greenhouse gas emissions reductions**, and **air quality**

nesp

Other Impacts

80.86.020(12) requires the UTC to "evaluate whether the plan is in the public interest, and includes the following:"

- equity,
- reduction of burdens,
- public health,
- environment,
- economic development,
- reduction in cost,
- reduction in risk,
- energy security and resiliency.

The Cost Test refers to this list as other impacts.

PSE already accounts for many of these impacts using Customer Benefit Indicators (CBI) as required by CETA for the electric system.

To comply with the Act, it is important that these impacts be applied consistently to the electric and gas system for determining the lowest reasonable cost.



The Role of Other Impacts in the Cost Test

The Cost Test specifies consistent treatment of other impacts across the electric and gas system

 If CBIs are used to account for non-energy impacts for the electric system, an equivalent should also be used for the gas system

The Cost Test allows for the following set of principles for other impacts

- Monetize as many impacts as possible and address them through modeling
 - E.g.: Public Health (currently treated as a non-monetary CBI for the electric system) could be monetized using EPA's COBRA tool that calculates the value of health benefits associated with reductions in air pollution
- Cost test should account for non-energy impacts as consistently as possible across all resource types and all stages of planning for long-term (IRP) and short term (CEIP)
- Address some impacts through complementary analyses
 - Rate and bill assessment
 - Equity impacts



The Role of Rate and Bill Assessments in the Cost Test

80.86.020(12)(g)(iv): "Results in a reasonable cost to customers, and projects the rate impacts of specific actions, programs, and investments on customers;"

The Cost Test includes two metrics for assessing rates and bills:

- Long-term rate forecast should be conducted for each utility portfolio
- PVRR would be used to indicate impacts on average customer bills

The purpose of the rate and bill assessments in the Cost Test:

Long-term rate forecast and PVRR would be used to inform the selection of the preferred portfolio

The incremental cost of complying with CETA requirement is not relevant to the Cost Test

Synapse Energy Economics Slide 50



Cost Test Components Used to Inform Preferred Portfolio

Lowest Reasonable Cost Impacts	Electric and Gas System Monetized Impacts	Electric and Gas Non-Monetized Impacts	Electric and Gas Complementary Analysis
Generation, trans., dist.	✓	-	-
Commodity, trans., dist.	✓	-	-
CCA allowances	✓	√ -	
Commodity	· -		-
Environmental Compliance	✓	-	-
Greenhouse Gas Externalities	· -		-
Other Environmental	✓ -		-
Public Health	✓	-	-
Reliability & Resilience	-	✓	-
Energy Security	- ✓		-
Risk	-	✓	-
Economic Development	-	✓	-
Energy Equity	-	✓	✓
Rate and Bill Impacts ate Assessment	-	✓	√
Level at Which Impacts are Applied	Portfolio	Portfolio	Portfolio

 Consideration of impacts will inform the short- and long-term portfolio



Cost-Effectiveness and Lowest Reasonable Cost: Statutory Sources

Impact Type	Impact Category	Impact Required by Statute	Cost-Effectiveness	Lowest Reasonable Cost
Utility System	Electric Utility System	Generation, transmission, distribution	DA, EIA, EFA	DA
	Gas Utility System	Commodity, transportation, distribution	DA, EIA, EFA	DA
	Electric & Gas	Purchase of CCA allowances	DA, EIA, EFA	DA
Но	Host Customer	Energy Impacts	DA, EIA, EFA	policies on resource preference/TRC, CETA
		Non-Energy Impacts	DA, EIA, EFA	policies on resource preference/TRC, CETA
		Low-Income Non-Energy Impacts	DA, EIA, EFA	policies on resource preference/TRC, CETA
	Othor Frais	Commodity	DA, EIA, EFA	DA
Non-	Other Fuels	Environmental Compliance	DA, EIA, EFA	DA
Utility System		Greenhouse Gas Externalities	DA, EIA, EFA	DA, CETA, CCA
System		Other Environmental	DA, EIA, EFA	DA, CETA, CCA
		Public Health	DA, EIA, EFA	CETA, CCA
	O i - t - l l l t -	Reliability & Resilience	DA	DA, CETA
	Societal Impacts	Energy Security	No mention in DA, EIA, EFA	DA, CETA
		Risk	?	DA, CETA
		Energy Equity	No mention in DA, EIA, EFA	DA, CETA
		Economic and Jobs	No mention in DA, EIA, EFA	DA
Rates	Rate Impacts	Rates, Bills, and Participation	No direct reference in statutes	No direct reference in statutes
Level at \	evel at Which the Standard is Applied		Measure, program, or resource	Utility system portfolio

DA = Decarbonization Act, CETA = Clean Energy Information Act, EIA = Energy Independence Act, CCA = Climate Commitment Act, EFA = Energy Finance Act (80.52 RCW)