



2023 GAS UTILITY IRP

TABLE OF CONTENTS



About PSE

As Washington State’s oldest local energy company, Puget Sound Energy serves more than 1.2 million electric customers and more than 900,000 natural gas customers in ten counties. Our service territory includes the vibrant Puget Sound area and covers more than 6,000 square miles, stretching from south Puget Sound to the Canadian border, and from central Washington’s Kittitas Valley west to the Kitsap Peninsula.

A subsidiary of Puget Energy, PSE meets the energy needs of its customers, in part, through incremental, cost-effective energy efficiency, procurement of sustainable energy resources, and far-sighted investment in the energy-delivery infrastructure. PSE employees are dedicated to providing great customer service and delivering energy that is safe, dependable and efficient. For more information, visit pse.com.

Our electric service territory includes all of Kitsap, Skagit, Thurston and Whatcom counties, and parts of Island, King (not Seattle), Kittitas, and Pierce (not Tacoma) counties.

Our natural gas service territory includes parts of King (not Enumclaw), Kittitas (not Ellensburg), Lewis, Pierce, Snohomish, and Thurston counties.

Figure 1.1 below shows PSE’s electric and gas service territories.



Figure 1.1 Puget Sound Energy Natural Gas and Electric Service Territories



Table of Contents: Chapters

Definitions and Acronyms

Chapter One: Executive Summary

1. Introduction
2. Resource Planning Foundations
3. Change Drivers
4. Resource Plan
5. Gas Short-term Action Plan

Chapter Two: Resource Plan

1. Introduction
2. Preferred Portfolio and Resource Plan



3. Rationale for the Preferred Portfolio
4. Portfolio Costs
5. Resource Deliverability
6. Emissions Reduction Potential

Chapter Three: Legislative and Policy Change

1. Introduction
2. Climate Commitment Act
3. Technology, Codes, Standards and Electrification
4. Inflation Reduction Act
5. Washington Clean Buildings Act

Chapter Four: Key Analytical Assumptions

1. Introduction
2. Resource Plan
3. Developing the Preferred Portfolio

Chapter Five: Demand Forecast

1. Introduction
2. Climate Change
3. Gas Demand Forecast
4. Methodology
5. Key Assumptions
6. Previous Demand Forecasts

Chapter Six: Gas Analysis

1. Introduction
2. Resource Need
3. Climate Commitment Act
4. Risk to Natural Gas Supply
5. Delivery System Planning



6. Gas Sales Analysis Results



Table of Contents: Appendices

Appendix A: Public Participation

1. Introduction
2. Public Participation Approach
3. Participants
4. Feedback Themes
5. Timeline, Meetings and Topics
6. Meeting Documentation

Appendix B: Legal Requirement

1. Introduction
2. Regulatory Requirements
3. 2021 Natural Gas Sales Short-term Action Plan

Appendix C: Conservation Potential Assessment

1. Executive Summary
2. Energy Efficiency Potential
3. Energy Efficiency Potential for Small Transport Customer Sector
4. Natural Gas-to-Electric Potential Assessment
5. Energy Efficiency Methodology Details

Glossary of Terms

Appendix A. Heat Pump Market Research Findings

Appendix B. Residential Heat Pump Adoption Survey

Appendix C. Heat Pump Cost and market Barriers Interview Guide (HVAC Contractors)

Appendix D. Heat Pump Cost and Market Barriers Interview Guide (Builders)

Appendix D: Demand Forecasting Models

1. Demand Forecast Methodology
2. Model Estimation



3. Climate Change Assumptions
4. Stochastic Demand Forecasts

Appendix E: Existing Resources and Alternatives

1. Existing Resources
2. Existing Storage Resources
3. Resource Alternatives
4. Supply and Demand-side Resource Alternatives
5. Climate Commitment Act – Electrification Scenarios in the CPA
6. Resource Alternatives Costs

Appendix F: Gas Methodology and Results

1. Analytic Methodology
2. Gas Peak Day Planning Standard
3. Deterministic Optimization Analysis
4. Gas Portfolio Model
5. Gas Portfolio Results

Appendix G: Electric Price Models

1. Introduction
2. Delivery System Planning
3. Pipeline Delivery System