

Revised Work Plan for NW Natural's 2009 Integrated Resource Plan

Issued October 7, 2008

Methodology

NW Natural will input manually compiled data into *SENDOUT*[®], a linear based programming model that will stochastically assess potential resources.

Develop Model Inputs	Finish by November 15
- price forecasts	
- load forecasts	
- supply side resources (existing)	
- supply side resources (proposed)	
- demand side resources	
Running Model	November 15 through December 15
- finalizing model	
- analyzing data	
Drafting Chapters ¹	December 15 through January 15
Finalize fist Draft IRP, prepare for distribution	January 15 through January 22
File Draft IRP	January 23
Technical Working Group Meetings ²	
- 1 st Meeting	November 5 (8:30 am to 12 pm) ³
- 2 nd Meeting	February 11 (8:30 am to 12 pm) ⁴
Public Participation	
- Invite Washington Customers	January Bill Inserts
- Public Meeting	February 17 (4:30 to 6:30)
File Final 2009 IRP	March 28 or 30 (as determined by WUTC Commission)
WUTC Public Meeting	

- 1 See Exhibit A attached to this Work Plan for the intended content of the 2009 IRP
2. NW Natural plans to supplement the Technical Working Group (TWG) meetings by periodically emailing draft chapters and appendices to TWG participants for their comments and edits.
- 3 The November 5th meeting will focus on the development of Model Inputs.
4. The February 11th meeting will discuss the results of the study as presented in the draft IRP filed January 23rd.

NW Natural 2009 IRP Work Plan

Exhibit A

Content of 2009 IRP

1. Executive Summary

- Overview of Company and Resource Plan
- Principal Conclusions from this Plan
 - Load Forecasts
 - Supply-Side Resources
 - Demand-Side Resources
 - Conservation Assessment

2. Gas Requirements Forecast

- Overview
- Customer Base
 - Forecasts
 - New Construction – Residential
 - New Construction – Commercial
 - New Construction – Industrial Firm
 - Conversions from other fuels – Residential and Commercial
 - Hybrid Heat Customers
- Use per Customer Forecasts
 - Residential and Commercial Load Equations
 - Industrial Firm Load Equations
 - Interruptible Customer Requirements
- Forecast Equation Performance
- Price Forecasts
 - Customer per Therm Usage Charge Forecast
 - Natural Gas Price Forecasts
- Weather Planning Standards
 - Design Day
- Key Findings

3. Supply-Side Resources

- Overview
- Current Resources
 - Pipeline Transportation Contracts
 - Gas Supply Contracts
 - Other Existing Supply Resources
 - Supply Diversity
 - Physical and Financial Hedging
- Supply-Side Resource Dispatching
- Recent Resource Decisions
- Future Resource Alternatives
 - Mist Storage Recall
 - NW Natural Infrastructure Additions
 - Enhancement of Pipeline from Newport
 - Brownsville to Eugene
 - Willamette Valley Feeder

NW Natural 2009 IRP Work Plan

Exhibit A

- Imported LNG
- Satellite LNG
- Potential Future Supply Resources
- Gas Supply Portfolio Acquisition Strategy
 - Overview
 - Plan Goals
 - Relationship to Integrated Resource Plan
 - Strategies
 - Market Outlook
- Emergency Planning
- Key Findings

4. Demand-Side Resources in Washington

- Energy Efficiency Overview
- Methodology – Energy Efficiency
- Energy Efficiency Study Result
 - Evaluation of Achievable DSM Programs
- Funding and Program Delivery
- Low Income Weatherization
- Other Demand-Side Management Considerations
 - Load Management and Demand Response
- Key Findings

5. Linear Programming and the Company's Resource Choices

- Overview - the Approach to Optimality
- Least Cost Optimization
- SENDOUT[®] – Resource Assessment Tool
- DSM evaluation in SENDOUT[®]
- SENDOUT[®] Scenarios, Portfolios & Results
- Key Findings

6. Avoided Cost Determination

- Overview Methodology
- Avoidable Capacity Resources.
- Avoidable Gas Commodity Costs
- Environmental Costs And Externalities
- DSM Conservation Load Shapes
- Avoided Cost Determinations
- After-Tax Real Discount Rate
- Key Findings

7. Public Participation

- Meeting invitations, agendas, significant documentation, emails, etc.