

Work Plan for NW Natural’s 2021
WASHINGTON
 Integrated Resource Plan

Methodology

The purpose of the Integrated Resource Plan (IRP) is to develop strategies for purchasing gas and improving efficiencies of gas usage to meet current and future needs consistent with a lowest reasonable cost approach. To do this, NW Natural will develop and integrate demand forecasts, weather patterns, natural gas price forecasts, and demand side and supply side resources into Gas Supply and Planning Optimization software. The resulting model will act as a guide to steer the Company toward the least cost resource planning portfolio.

Technical Working Group Meetings

The table below provides the schedule for Technical Working Group meetings.

Technical Working Group (TWG) Meetings	
1st Meeting Planning Environment and Environmental Policy	June 3, 2020 9:30 a.m. – 3:30 p.m.
2nd Meeting Load Forecast & Avoided Costs	July 1, 2020 9:30 a.m. – 3:30 p.m.
3rd Meeting Demand Side & Supply Side Resources	August 4, 2020 9:30 a.m. – 3:30 p.m.
4th Meeting Storage Projects	September 2, 2020 9:30 a.m. – 3:30 p.m.
5th Meeting Portfolio Results and Distribution System Planning	October 7, 2020 9:30 a.m. – 3:30 p.m.
6th Meeting Open – May be cancelled if not needed	October 28, 2020 9:30 a.m. – 3:30 p.m.
File Draft 2021 Washington IRP	December 4, 2020
Comments Due Back by	January 15, 2021
File Final 2021 Washington IRP	February 26, 2021

In addition to the Technical Working Group meetings, once the draft has been completed, a public meeting will be held at NW Natural to review the draft and receive public comments. Customers will be notified of the draft IRP and the public meeting via bill inserts and the monthly eNewsletter. Additionally, customers will also be directed to the draft IRP on our website and the Company will ask for comments.

It is expected that all meetings will be held at the company’s headquarters at 250 SW Taylor Street in Portland, Oregon.

Content of 2021 Integrated Resource Plan

1. **Executive Summary**
 - Overview of Company and Resource Plan
 - Principal Conclusions from this Plan
 - 2021 IRP Multi-Year Action Plan

2. **Planning Environment**
 - Econometric/Demographic Factors
 - Gas Price Forecast
 - RNG Markets
 - New Technologies

3. **Environmental Policy**
 - Environmental Policy– Federal
 - Environmental Policy & Codes – State
 - Environmental Policy & Codes– Local
 - Carbon Price Forecast

4. **Load Forecast**
 - Customer Forecast
 - Climate Impacts
 - Residential & Commercial Forecasts
 - Industrial Forecast
 - Emerging Markets
 - Annual Load
 - Daily System Load Model
 - Planning Standard
 - Peak Day Forecast
 - Scenario Comparison

5. **Avoided Costs**
 - Components
 - Demand Side & Supply Side Applications
 - Results

6. **Demand-Side Resources in Washington**
 - Energy Efficiency Overview
 - Energy Efficiency Methodology
 - Demand-Side Management Forecasts
 - Demand Response
 - GeoTEE

- Low Income Programs
- Demand-Side Scenario Comparisons

7. Supply-Side Resources

- Current Resources
- Investments in Current Resources
- Future Resource Alternatives (inclusive of RNG)
- Supply-Side Scenario Comparison

8. Portfolio Results

- Resource Planning Model Integration
- Resource Planning Model Results
- Emissions Forecast
- Monte Carlo Simulation
- Scenario Analysis

9. Distribution System

- Peak Hour Forecasting
- Distribution System Planning Criteria
- Non-pipeline Solutions
- Supply Side Resources
- Projects
- Alternatives Analysis
- Preferred Option

10. Public Participation