

**BEFORE THE PUBLIC UTILITY COMMISSION  
OF OREGON**

LC 37

|                                |   |       |
|--------------------------------|---|-------|
| In the Matter of               | ) |       |
|                                | ) | ORDER |
| NORTHWEST NATURAL              | ) |       |
|                                | ) |       |
| 2004 Integrated Resource Plan. | ) |       |

**DISPOSITION: PLAN ACKNOWLEDGED WITH MODIFICATIONS**

Northwest Natural Gas Company (NW Natural or the company) filed its 2004 Integrated Resource Plan (IRP or plan) on March 28, 2005. The plan is intended to meet the requirements of the Public Utility Commission of Oregon (OPUC) Order No. 89-507. The plan was docketed as LC 37.

**OVERVIEW OF NW NATURAL’S INTEGRATED RESOURCE PLAN**

NW Natural’s 2004 IRP is organized into two volumes. Volume I provides the Executive Summary of the plan’s components, findings, and conclusions, as well as the Multi-Year Action Plan. Volume II is the Technical Appendix that provides the technical and procedural details of the plan and planning process.

NW Natural's IRP describes the basic components of the company's planning process. The 2004 plan includes a forecast of its future market demand, adjustment of the demand forecast to account for the projected energy savings resulting from the energy efficiency programs Energy Trust of Oregon (ETO) is delivering to NW Natural’s customers, assessments of supply-side resource options, consideration of planning uncertainties, analysis and selection of supply-side resource options for meeting future needs, and identification of actions to be accomplished over the next several years to carry out the company's resource strategy and additional planning activities.

· *Forecast.* NW Natural's load forecast is based on projected economic trends for its service territory, anticipated gas prices, expected population growth patterns, and estimated usage patterns of its core market customers over 30 years. These factors were integrated into the forecast using a variety of econometric and computer-based modeling tools. The company used the Oregon Economic and Revenue Forecast and the Woods & Poole 2003 County Projections for Oregon and Washington as sources to forecast system and district-level projections of growth. NW Natural forecasted low, medium, and high gas consumption scenarios, but believes the medium growth forecast scenario is most likely to occur. Under this scenario, NW Natural’s total firm customers are anticipated to grow at an average annual

rate of 2.54% over the first 20-year forecast period. Firm core market demand is projected to grow at an annual growth rate of 1.8% for both peak and annual requirements.

· *Demand-Side Resources.* NW Natural's 2004 IRP assumes that the Energy Trust of Oregon (ETO) will continue to deliver natural gas energy efficiency programs with public purpose funds to NW Natural's Oregon residential and commercial customers through 2012, which is the end of ETO's current authorization. The plan adjusts its long-term demand forecast by ETO's projected energy savings and load shapes through February 2012. The IRP also assumes NW Natural will continue to administer the Oregon Low Income Energy Efficiency (OLIEE) program with dedicated public purpose funds, although no savings were forecast for this planning period because of the uncertainty of the program savings when the plan was put together.

· *Supply-Side Resources.* Supply-side options available to gas utilities include flowing gas supplies through interstate pipelines, storage, and recallable supply arrangements. NW Natural's flowing gas supplies originate in the Canadian provinces of British Columbia and Alberta and in the U.S. Rocky Mountain area. The company's supplies include annual contracts, firm winter peaking contracts, and spot gas, as it is available. NW Natural contracts with Northwest Pipeline Corporation for interstate pipeline transportation into the company's service areas in Washington and Oregon. NW Natural has also negotiated transportation contracts in conjunction with commitments for firm Alberta and British Columbia supplies to be delivered via Gas Transmission Northwest, TransCanada's BC system, TransCanada's Alberta system, Westcoast Energy Inc., and Southern Crossing Pipeline. The company releases excess pipeline capacity into the secondary market when the capacity is not fully utilized. NW Natural's storage resources include the Mist underground storage facility and the Newport and Portland Liquefied Natural Gas (LNG) facilities. The company also has contracts for underground storage at Jackson Prairie and LNG storage at Plymouth, Washington. NW Natural has four recallable agreements with three parties that allow the company to use their gas deliveries to the company's service territory for a limited number of days during the heating season. The IRP evaluated a variety of resource alternatives to meet additional capacity needs over the planning horizon including incremental pipeline capacity, recall of existing Mist underground storage capacity to core market service from the interstate storage market, additional underground storage development, satellite LNG storage, and propane air systems.

· *Integration Strategies.* NW Natural's IRP concludes that the company's existing supply resources are in balance with firm demand under design day peak conditions. As a consequence, new resources must be added each year to meet expected firm load growth. NW Natural's optimal resource portfolio, developed using the company's network linear programming model, determined that recalling or developing new storage resources for core market service is preferred over additional pipeline capacity in the near term. The model selected available recalls of Mist storage to core service and expansions to Mist storage resources over the first 13 years of the planning period. Additional pipeline capacity was

selected by the model beginning in 2018/19 to meet NW Natural's projected working gas needs. The company evaluated a number of sensitivity cases to test the planning results under a variety of alternative assumptions and parameter estimates. The analysis confirms the plan's conclusions on optimal resources selected in the base case.

· *Multi-Year Action Plan.* NW Natural's Multi-Year Action Plan describes the actions the company will take over the next several years to implement its optimal resource strategy while maintaining reliable service. On the supply side, NW Natural will continue to recall daily and annual underground storage capacity at Mist from the interstate storage gas market to core market service as needed. Based on the base case load growth assumptions in the plan, the company plans to recall 200,000 therms per day of deliverability in both 2005 and 2006. NW Natural also plans to evaluate the costs and benefits of marine LNG located in the Pacific Northwest and to refine cost estimates associated with future supply-side resource options. On the demand side, the company will continue to work with ETO to improve energy efficiency delivery programs and program participation rates. NW Natural will also evaluate the cost effectiveness of the ETO, OLIEE, and Washington energy efficiency programs. The company plans to refine its methods for district level forecasting of customer gains and losses and use per customer. NW Natural will improve its optimization modeling and IRP integration by continuing to develop a linear programming-based dispatch model for the evaluation of short-term gas procurement and supply-side dispatch designs. The company will also continue to improve its network linear programming model for capacity planning in the development of its next IRP.

### **Comments of the Parties**

The company solicited initial comments from parties, including Staff of both the Oregon and Washington Commissions, within the Technical Working Group process prior to issuing the draft 2004 IRP on October 12, 2004. Staff submitted comments on the draft plan on December 2, 2004. The Commission received the final IRP on March 28, 2005. Staff solicited comments on the final IRP from the parties on May 11, 2005. No comments were received from other parties. Staff distributed its draft recommendations and a draft proposed order on the plan to interested parties on July 7, 2005. NW Natural filed reply comments to Staff's draft recommendations/order in a letter dated July 21, 2005. No other comments or recommendations on the plan were received from Oregon parties or customers.

**Commission Staff Comments.** NW Natural addressed most of Staff's issues prior to filing its final integrated resource plan on March 28, 2005. Staff recommends the Commission acknowledge NW Natural's 2004 IRP, subject to the following five modifications:

1. NW Natural must add an action plan item to its Multi-Year Action Plan which states, "By October 1, 2005, NW Natural will submit a schedule for meeting with Staff over the next 18 months to discuss its critical decision/action points on gas commodity

purchasing, including its financial hedging guidelines and strategies; transportation; storage; and distribution system planning.”

2. For its next IRP, NW Natural must prepare a more detailed analysis and description of all the available supply options (facilities and commodity) to provide natural gas service to all segments of system needs.

3. NW Natural must expand the discussion of how its facilities planning (for the movement and delivery of natural gas) and commodity acquisition planning (the purchase of natural gas supply) are integrated in its next IRP.

4. NW Natural must augment the discussion of its competitive bidding practices (particularly for commodity) in its next IRP.

5. NW Natural’s next IRP must include a full assessment of cost-effective DSM potential in its service territory over the 20-year planning period. The plan should also evaluate whether the public purpose charges for energy efficiency and low-income energy efficiency programs are set at reasonable levels or should be modified.

**NW Natural Gas Reply Comments.** By letter dated July 21, 2005, NW Natural accepted the modifications to the plan recommended by Staff.

## OPINION

### Jurisdiction

NW Natural is a public utility in Oregon, as defined by ORS 757.005, which provides natural gas service to or for the public.

On April 20, 1989, pursuant to its authority under ORS 756.515, the Commission issued Order No. 89-507 in Docket UM 180 adopting least-cost planning for all energy utilities in Oregon.

**Requirements for Least-Cost Planning under Order No. 89-507**

Order No. 89-507 establishes procedural and substantive requirements for least-cost planning and requires the Commission's acknowledgment of plans that meet the requirements of the order.

**Procedural requirements.** At a minimum, the least-cost planning process must involve the Commission and public prior to making resource decisions rather than after the fact. *See* Order No. 89-507 at 3.

NW Natural sought public input during the planning process by informing customers about its planning process and by conducting public meetings and technical conferences on the plan. The company's technical working group included representatives from Oregon and Washington Commission Staffs, Citizens' Utility Board, Northwest Industrial Gas Users, Energy Trust of Oregon, Northwest Power and Conservation Council, Williams Northwest Pipeline, National Energy & Gas Transmission, and Avista Corporation. The group provided input on many of the company's planning assumptions during two meetings. NW Natural conducted two public meetings in Portland and Salem to provide information to customers on the planning process and principal findings. The company distributed a draft plan for comment before developing and submitting the final plan to the Commission.

**Substantive requirements.** The substantive requirements were also set forth in the Commission order as follows:

1. All resources must be evaluated on a consistent and comparable basis.
2. Uncertainty must be considered.
3. The primary goal must be least cost to the utility and its ratepayers consistent with the long-run public interest.
4. The plan must be consistent with the energy policy of the state of Oregon as expressed in ORS 469.010.

Order No. 89-507 at 7.

**Evaluation of Resources.** NW Natural's IRP evaluated supply-side resources on a consistent and comparable basis over the planning period. Numerous linear programming runs were completed to evaluate resource scenarios for the plan. All resources were evaluated under the same criteria. The characteristics of alternative resources were varied over realistic ranges to evaluate the effects of resource selection on the cost to meet NW Natural's customers' energy needs. Because of the public purpose funding mechanism

provided for in Order No. 02-634, NW Natural decided not to treat the selection of demand-side resources as a variable to be determined within the linear program in the 2004 IRP. Instead, the plan's demand forecast is adjusted downward to reflect forecast energy savings resulting from the activities of ETO through 2012. Future plans will include demand-side resource options in the resource integration. Environmental externalities were evaluated in the IRP by adding the cost per therm equivalent of the externality cost values to supply-side resources as described in OPUC Order No. 93-965. NW Natural found that environmental costs have no appreciable impact on the company's supply-side choices, although they do impact the level of demand-side measures that could be cost-effective to acquire.

**Uncertainty.** NW Natural's IRP addressed uncertainty in demand forecasts and in resource availability. The company considered uncertainty in demand by developing a range of demand forecasts. Other uncertainty factors considered by NW Natural in its 2004 plan results include higher and lower customer growth, a return to earlier customer usage levels, higher and lower cost for feeder capacity, reductions in summer/winter gas price differentials, alternative cost levels for shortfall gas, the return of industrial firm customers to sales service, use of more severe design winter modeling, and the assumption that ETO continues delivering energy efficiency programs beyond 2012.

**Primary Goal of Plan Must Be Least Cost.** The primary goal of NW Natural's IRP is to provide natural gas service to its customers at the least cost consistent with an appropriate reliability standard and the long-run interests of Oregon energy consumers. The linear programming model used by the company to evaluate its resource options provides the analytical tool to help NW Natural minimize total system cost to serve its customers' energy needs over the long run.

**Consistency with Oregon's Energy Policy.** The Legislature mandated certain energy-related goals in ORS 469.010. These goals relate primarily to the development of sustainable energy resources. NW Natural believes its plan is consistent with these goals. The company works with ETO to provide significant opportunities for its core residential and commercial customers to participate in energy efficiency programs that provide demand-side energy savings to NW Natural.

We conclude that NW Natural has complied adequately with the procedural and substantive requirements of Order No. 89-507 for purposes of this plan.

### **Commission Decisions on Parties' Comments**

At our August 16, 2005 Public Meeting, Staff recommended the Commission acknowledge NW Natural's 2004 IRP with five specific recommendations related to the utility's Multi-Year Action Plan, and future planning process. There were no additional comments or recommendations made by Oregon parties or customers on the plan. Commissioner Savage added one condition—requiring NW Natural to file an interim

recommendation as to the public purpose charge 90 days after the Oregon Energy Trust issues its short-term demand-side assessment. NW Natural accepted Staff's and the Commissioner's recommendations on the plan and future planning activities. With those additional conditions, we acknowledge NW Natural's IRP.

**EFFECT OF THE PLAN ON FUTURE RATE-MAKING ACTIONS**

Order No. 89-507 sets forth the Commission's role in reviewing and acknowledging a utility's least-cost plan, as follows:

The establishment of least-cost planning in Oregon is not intended to alter the basic roles of the Commission and the utility in the regulatory process. The Commission does not intend to usurp the role of utility decision-maker. Utility management will retain full responsibility for making decisions and for accepting the consequences of the decisions. Thus, the utilities will retain their autonomy while having the benefit of the information and opinion contributed by the public and the Commission.

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Plans submitted by utilities will be reviewed by the Commission for adherence to the principles enunciated in this order and any supplemental orders. If further work on a plan is needed, the Commission will return it to the utility with comments. This process should eventually lead to acknowledgment of the plan.

Acknowledgment of a plan means only that the plan seems reasonable to the Commission at the time the acknowledgment is given. As is noted elsewhere in this order, favorable rate-making treatment is not guaranteed by acknowledgment of a plan.

Order No. 89-507 at 6 and 11.

This order does not constitute a determination on the rate-making treatment of any resource acquisitions or other expenditures undertaken pursuant to NW Natural's 2004 IRP. As a legal matter, the Commission must reserve judgment on all rate-making issues. Notwithstanding these legal requirements, we consider the integrated resource planning process to complement the rate-making process. In rate-making proceedings in which the reasonableness of resource acquisitions is considered, the Commission will give considerable weight to utility actions which are consistent with acknowledged integrated resource plans. Utilities will also be expected to pursue unanticipated least-cost opportunities beneficial to ratepayers which arise after Commission acknowledgment or, alternatively, explain why such opportunities were not pursued.

**CONCLUSIONS**

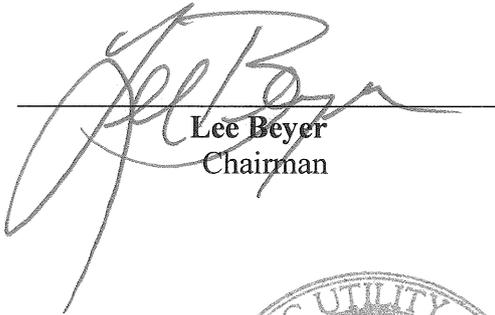
1. NW Natural is a public utility subject to the jurisdiction of the Commission.

2. NW Natural's 2004 Integrated Resource Plan, with the modifications adopted herein, reasonably adheres to the principles for least-cost planning set forth in Order No. 89-507. The plan will assist in insuring that NW Natural's customers receive adequate service at fair and reasonable rates and is otherwise in the public interest.

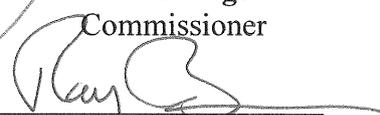
**ORDER**

IT IS ORDERED that the 2004 Integrated Resource Plan filed by Northwest Natural Gas Company on March 28, 2005, as modified herein, is acknowledged in accordance with the terms of this order and Order No. 89-507.

Made, entered, and effective     AUG 29 2005    .

  
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**Lee Beyer**  
Chairman

  
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**John Savage**  
Commissioner

  
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**Ray Baum**  
Commissioner

