EXHIBIT NO. _____ (WAG-30)
DOCKET NO. UE-031725
2003 POWER COST ONLY RATE CASE
WITNESS: WILLIAM A. GAINES

BEFORE THE

WASHINGTON UTILITIES AND TRANSPORTATION COMMISSION

WASHINGTON UTILITIES AND TRANSPORTATION COMMISSION, Complainant, v. PUGET SOUND ENERGY, INC., Respondent.	Docket No. UE-031725

REBUTTAL TESTIMONY OF
WILLIAM A. GAINES
ON BEHALF OF PUGET SOUND ENERGY, INC.

FEBRUARY 13, 2004

HISTORICAL OVERVIEW OF THE NATURAL GAS AND ELECTRIC INDUSTRY IN THE 1990s

Until the mid-1990s, western electric utilities were typically vertically integrated, and transactions were predominantly utility-to-utility. However, the wholesale natural gas markets had been significantly restructured over the previous decade. FERC's Order 636 opened interstate gas pipeline capacity access and retail access for commercial and industrial customers. Deregulation, additional supply, and transportation improvements were expected to drive down wholesale gas costs. *See, e.g.*, Ex. __ (WAG-44) at p. 2; Ex. __ (WAG-30A). Indeed, in the mid-1990s natural gas prices experienced successive periods of falling prices. *See, e.g.*, Ex. __ (WAG-44) at pp. 10, 17, 18, 28.

FERC and numerous voices in the country were pushing toward deregulation in the electric industry as well. The future of traditional, vertically integrated load-serving electric utilities was unclear. *See, e.g.*, Ex. __ (WAG-44) at pp. 4, 12. In the event that Washington moved to retail competition, PSE was faced with the prospect of stranded costs and the attendant adverse impact on the Company and its ability to serve its remaining retail customers. Indeed, this Commission stated in late 1995:

> [R]egulation cannot and should not be expected to guarantee utilities will, in all circumstances, be made entirely whole for generation or other costs that are determined through actual and fair competition to be stranded or uneconomic.

In re the Commission's Notice of Inquiry: Examining Regulation of Electric Utilities in the Face of Change in the Electric Industry, Docket No. UE-940932, Policy Statement: Guiding Principles for Regulation in an Evolving Electricity Industry (Dec. 11, 1995), Principle No. 8 (copy attached in Ex. __ (WAG-30B) at p. 2).

Before their merger, Puget Sound Power & Light Company ("PSP&L") and Washington Natural Gas Company ("WNG") monitored these rapid changes in the industry, and considered how to integrate them into their traditional resource acquisition and management activities. *See, e.g.* PSP&L's February 24, 1995 Draft 1995-96 Integrated Resource Planning Update for Technical Advisory Committee Review at 1-3, 5-6, 29; WNG's 1995 Least Cost Plan filed December 8, 1995 at II-1 – II-5, V-1, V-3 – V-5, C-1 – C-4 (excerpts of both documents provided in Ex. __ (WAG-30C)).

FERC's issuance of Orders 888 and 889 in April 24, 1996 reflected FERC initiatives to restructure the electric industry. Also in 1996, the California Legislation (Assembly Bill 1890) led to restructuring of the electric generation market in California. This legislation was thought by some to be a model for restructuring elsewhere. Under this legislation, the State's investor-owned utilities divested generation assets and transferred control of their transmission lines to the California ISO. These developments introduced many new market participants to the Western

Systems Coordinating Council ("WSCC") region. *See, e.g.*, Ex. __ (WAG-44) at pp. 38-39.

Due to the development of a competitive wholesale market and a variety of other factors, power prices available in the wholesale market were lower than rates for power charged by traditional utilities based on embedded, historical power costs. Ex. __ (WAG-44) at p. 21. Lower gas prices and changes in the west coast power market were expected to produce relatively stable or declining electricity prices in real dollar terms, with "substantial supplies of electricity costing around 2 cents per kilowatt-hour well into the next decade." Ex. __ (WAG-30A) at pp. 2-6.

Retail electric customers, particularly large industrial customers, began pressing for access to market-based rates rather than rates based on embedded costs of service. A number of customers began exploring opportunities to bypass PSE's system if they were not granted access to market-based rates. For example, ICNU was pressing for hourly, indexed-based pricing. See Letter from Ken Canon to Steve McLellan dated July 15, 1996 in Docket No. UE-960696 (copy attached in Ex. __ (WAG-30D) at p. 4). *See also id.* at p.5-6; Ex. __ (WAG-44) at pp. 1-2, 22. This phenomenon was not limited to PSE, as customers of BPA and other utilities in the region similarly pressed for access to market-based pricing. Many utilities responded by offering their industrial customers access to such pricing, and others lost customers to competitive providers. *See, e.g.*, Ex. __ (WAG-44) at pp. 5-6, 8, 15, 24-27, 29-31. States and utilities throughout the region experimented with or transitioned to retail open access. Ex. __ (WAG-44) at pp. 34-37, 40.

By summer 1996, the non-regulated wholesale marketers were pushing for retail access to utility customers. In June 1996, Enron sent a letter to Puget Power's customers urging them to enter into power purchase agreements with Enron "at a price significantly lower than the customer is currently paying" and then litigate any refusal by Puget Power to transmit Enron's power to them. *See* Letter from Enron Capital & Trade Resources, produced in Puget Power's Response to Staff Data Request No. 27 in Docket No. UE-960696, copy provided in Ex. __ (WAG-30D) at pp.9-11. In the Q&A section of its letter, in response to the question about "what happens if prices go back up?", Enron answered:

> Enron is so confident that increasing competition will keep electricity prices down for the foreseeable future that it is willing to enter into long-term contracts of 15-20 years.

Ex. __ (WAG-30D) at p. 11.

Puget Power developed Schedule 48 to meet the industrial customers' demand. This rate schedule was predicated upon providing market-sensitive pricing to large customers. The Commission approved Schedule 48 on October 30, 1996 in Docket No. UE-960696. At the time, Public Counsel objected that only PSE's industrial customers were gaining access to market based rates and argued: "Market based rates should be developed for all customers and offered at substantially the same time." Public Counsel Comments of July 12, 1996, Docket No. UE-960696, copy provided in Ex. __ (WAG-30D) at p. 3.

On December 12, 1996, the Steering Committee of the Comprehensive Review of the Northwest Energy System, a group convened by the governors of Idaho, Montana, Oregon and Washington to study the region's power system and make recommendations about its transformation toward a more competitive electricity market, issued its Final Report. The Steering Committee recommended "that regulators and local utility boards and commissions offer open access for all customers that desire it no later than July 1, 1999." Comprehensive Review of the Northwest Energy System Final Report, December 12, 1996, at p. 7 (excerpts attached at Ex. __ (WAG-30E) at p. 5). Shortly thereafter, legislative efforts were explored in Washington by Senator Finkbeiner and others to mandate restructuring (Senate Bill 6006, considered in the 1997 session of the Legislature).

In this environment, PSE's long-term fixed price PURPA contracts were criticized as uneconomic and inflexible. In proceedings on the requested approval of the merger between WNG and Puget Power, the Commission Staff witness testified:

> The price increases associated with Puget's PURPA resource contracts are a major source of continued upward rate pressure, and contribute to Puget having the highest retail electric rates in the region.
>
> . . .
>
> The wide discrepancy between the embedded cost of power in rates and market prices, and power contract-related rate pressures, are occurring during a period of low short-run prices for power in the regional market. The low prices result from federal government open transmission access initiatives, a surplus of generating capacity in the region, the increasing presence of power marketers and brokers, and continued low natural gas prices. To the extent that the terms and conditions of its long-term PURPA contracts limit the Company's

> ability to take advantage of low wholesale spot market prices, core customers have little opportunity to achieve lower rates.

Testimony of James W. Miernyk dated September 1996, Docket No. UE-960195, at pp. 3, 9 (excerpts provided in Exhibit __ (WAG-30F)).

In sum, PSE had to make business decisions on an ongoing basis during the 1990s during a period of massive upheaval and change in the natural gas and electric industries. As the Commission stated at the time: "The pace and scope of change in the electric industry has been faster and broader than the Commission could have imagined." *In re the Commission's Notice of Inquiry: Examining Regulation of Electric Utilities in the Face of Change in the Electric Industry*, Docket No. UE-940932, Notice of Termination of Notice of Inquiry (April 22, 1998), at 1 (Ex. __ (WAG-30B) at p. 4). Notwithstanding the Commission's reservations about the direction of this change, it appeared that change might well be mandated in Washington State by FERC or the Legislature. *See id.*

In this environment, PSE's inability to take greater advantage of lower short-term energy prices available in wholesale markets and the potential for massive stranded costs and resulting adverse impact on PSE and many retail customers were viewed as significant future risks. PSE sought to reduce its dependence upon fixed-price long-term natural gas supplies under its PURPA contracts. Moving the Tenaska (and later the Encogen/Cabot) fuel supply costs to market was an important step in that direction. As stated in PSE's Petition in Docket No. UE-971619, the Company's objective in entering into the amended agreement for Tenaska was "to drive the gas

cost element of a long-term fixed price escalating PURPA power contract toward market…." Petition for Accounting Order at 2 [Exhibit KLE-3C at 3]. See also Ex. __ (WAG-29). By purchasing energy in short-term markets, as opposed to through contracts for long-term fixed prices, PSE felt it would be able to take greater advantage of lower energy prices available at the time and have increased flexibility to address these rapidly changing and uncertain industry circumstances.

Draft Fourth Northwest Conservation and Electric Power Plan

Northwest
Power Planning
Council

96-5
Adopted on March 13, 1996

CHAPTER 1

EXECUTIVE SUMMARY

Competition in the electricity industry could mean lower prices and more choices for consumers. It is good news.

The electricity industry in the United States is in the midst of significant restructuring. This transformation will move the industry from the regulated monopoly structure of the past 50 years to a more competitive model.

There is much to be gained in this transition. Electricity consumers are already benefiting from competition in a number of significant ways. Competition in the natural gas industry has helped lower the cost of electricity from gas-fired generating plants. Competition among manufacturers and developers of combustion turbines has contributed to less expensive, more efficient, shorter lead time power plants. Broad competition in the electricity industry could result in lower prices for consumers and more choices about the sources, variety and quality of their electrical service. This is good news. The opportunities are great.

But, there are also risks inherent in the transition to more competitive electricity services. Merely declaring that a market is competitive will not necessarily achieve the full benefits of competition or ensure that they will be broadly shared. It is entirely possible to have deregulation without true competition. How competition is structured is important.

It is also important to recognize the limitations of competition. Competitive markets are about efficiency, not fairness or other social goals. To the extent that the citizens of the Northwest want their electricity system to deliver certain social benefits, such as low-cost electricity to rural areas or fish and wildlife recovery, special attention will be required to accomplish those goals during and after the industry's transition.

Similarly, markets are never perfect. For example, prices rarely reflect the environmental consequences of resource development and operation. Inadequate information and related market barriers also inhibit the market for energy efficiency. Again, if the citizens of the Northwest value environmental quality and energy efficiency, special care will be required to ensure that these values are upheld while the region captures the benefits of a more competitive electricity industry.

To seize the opportunities and moderate the risks inherent in the transition to competitive electricity markets, the governors of the four Northwest states convened a "Comprehensive Review of the Northwest Energy System." The governors appointed a broadly representative

2

steering committee to study that system and make recommendations about its transformation. Each governor has also appointed a representative to make certain the public is educated about and involved in the Comprehensive Review. In establishing the review, the governors stated:

> *"The goal of this review is to develop, through a public process, recommendations for changes in the institutional structure of the region's electric utility industry. These changes should be designed to protect the region's natural resources and distribute equitably the costs and benefits of a more competitive marketplace, while at the same time assuring the region of an adequate, efficient, economical and reliable power system."*

The goal is effective competition that does not sacrifice the region's societal or environmental values.

This is not the first time the Northwest states and stakeholders within the region have come together to address the future of the region's power system and related issues critical to the economy and environment of the Northwest. For more than 15 years, Idaho, Montana, Oregon and Washington have worked cooperatively to protect the resources of the Columbia River Basin, which is the source of the region's vast hydroelectric system and its largest and most complex ecosystem.

Through the Northwest Power Act of 1980, these states formed a compact and established the Northwest Power Planning Council to help plan for the future of the power system, and inform and involve citizens of the region in the planning process. Congress and the four Northwest states identified and embraced a set of long-term goals in the Power Act:

- To achieve cost-effective conservation;
- To encourage the development of renewable energy resources;
- To establish a representative regional power planning process; and
- To assure the region of an adequate, efficient, economical and reliable power supply.

Since the creation of the Council, utilities, businesses, local governments and others in the region have saved more than 1,200 average megawatts of electricity, enough to power a city the size of Seattle. These savings cost utilities an average of 2 cents to 2.5 cents per kilowatt-hour. That's about half the cost of power from the lowest-cost new generating resources available at the time. The environmental benefits of foregoing new generating resources in favor of conservation have not been calculated, but it is likely that they are substantial.

The four states, utilities, local governments, businesses and citizens have also worked together to promote wind and geothermal demonstration power plants, which are now in various stages of development. These are accomplishments of which the Northwest can be proud. No other region in the nation has worked so successfully as a team to manage so vast and complex a resource as the Northwest power system.

The goals of the Northwest Power Act were the product of a different era, an era of regulated monopoly utilities and large, capital-intensive resources. Nonetheless, many of these goals are still relevant in the increasingly competitive utility world. The industry transformation could challenge or help further those goals, depending on how the transformation is structured and how successful the region is in fashioning mechanisms to achieve those goals.

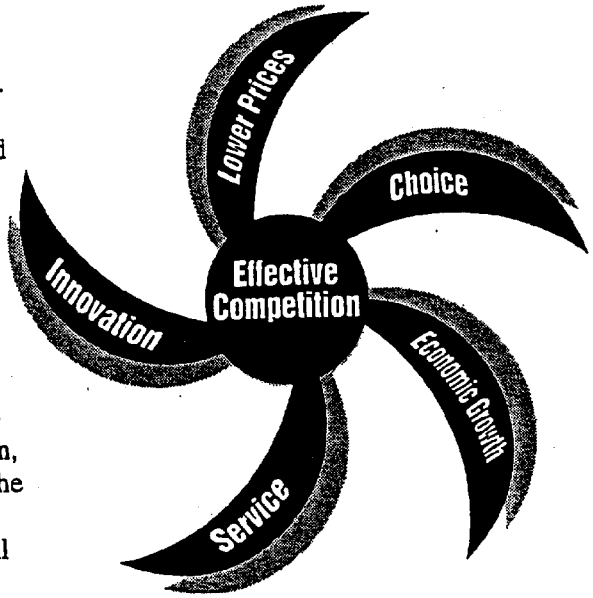
The Fourth Northwest Power Plan

This Draft Fourth Northwest Conservation and Electric Power Plan was begun as fulfillment of the Power Act mandate to prepare and adopt "a regional conservation and electric power plan" and review that plan at least every five years. The Council's last plan was adopted in 1991.

The timing of this draft plan, in light of the governors' review, requires a different approach than that taken in previous Council power plans.

3

Consequently, this draft contains few recommended actions or policy decisions. It is instead a reference tool, containing background on the industry and its current restructuring, as well as analysis of some of the major issues that must be addressed as the Northwest advances toward its new energy future. Because the Bonneville Power Administration, which markets about half the electricity generated in the Northwest, and the Council itself will be profoundly affected by the transformation of the industry, issues related to their futures are also explored.



The Benefits of Effective Competition

The goal of this draft plan mirrors and supports the governors' goal in setting in motion the Comprehensive Review. The key issues and findings are summarized in the following pages.

The Evolving Northwest Electricity Industry

The electricity industry in the Northwest is evolving rapidly in the direction of increased competition. This trend is the product of the interaction of a number of developments. Prices for natural gas have fallen dramatically. And the technology of gas-fired electricity generation has been advanced to the degree that new combined-cycle gas power plants are relatively low-cost, flexible resources. These changes have broken down the financial barriers that once blocked entry into the electricity generation business.

These forces have been amplified by important policy changes at federal and state levels. Federal policies encouraging competition in generation began with the Public Utilities Regulatory Policy Act of 1978 (PURPA) and have been advanced by the National Energy Policy Act of 1992. The Federal Energy Regulatory Commission is in the process of adopting new rules to ensure competitive wholesale power markets. Progress toward competition at the retail level has been left to the states to determine and shape. In many states, the prospect of lower-cost power is driving consumers of large amounts of electricity to seek access to the competitive market or at least to market prices.

While rates in the Northwest are generally lower than elsewhere in the country, the pressure for retail competition is evident here as well. The Bonneville Power Administration, which markets electricity from the federal power system, is a power wholesaler and, as such, is already fully exposed to competition. Bonneville's size and importance in the regional power system mean that wholesale competition will have dramatic effects in the Pacific Northwest regardless of actions at the retail level. This plan reviews the evolution toward increased competition and the forces driving it in Chapter 2.

Capturing the Benefits of Competition

Competition in the electricity industry has been promoted because it is considered to be more effective than regulation in fostering improved productivity, greater innovation, increased choice and lower costs to consumers. However, while the Pacific Northwest could benefit greatly from more open competition in the utility industry, the region shouldn't assume that deregulation alone will ensure these benefits. Without a market structure that fosters effective competition, the industry could simply replace regulated monopolies with deregulated oligopolies — where a few large companies have near-monopoly power.

There are generally recognized conditions that need to be met to foster effective competition. For example, an effective market requires an adequate number of sellers, and market access by buyers and sellers to ensure that no individual has the power to influence prices in the market. The

Federal Energy Regulatory Commission (FERC) is pursuing policies intended to satisfy these conditions at least partially, by expanding access to electricity markets through transmission systems.

Deregulation does not guarantee competitive markets.

An effective market also requires that sellers cannot subsidize their competitive position by shifting costs to customers in a monopoly part of their business. This condition could be met by separating companies into their competitive and monopoly components.

Even if effective competition is achieved in the utility industry, market imperfections and other barriers could keep the industry from functioning efficiently. For example, if environmental costs and benefits are not taken into account, the utility industry will fall short of environmental goals. Other market barriers can limit the amount of energy conservation that is secured. Consequently, continued attention to market imperfections may still be required even in competitive markets.

There are also some things that competitive markets simply can't do. In the Northwest, for example the utility system supports social goals, such as economic development in remote rural areas or promotion of irrigated agriculture, generally by offering lower rates for these purposes. In a competitive electricity market, it may be difficult to include the costs of providing low rates to some in the prices charged to others. If supporting such social goals is to continue, new avenues and sources for the support may need to be identified.

Finally, how the transition from the regulated utility industry to a more competitive market is structured is critical. The transition requires reconciling decisions and actions made in the regulated environment with the new realities of competition.

Stranded investment — the inability to recover the full costs of past utility decisions at current market prices — is the most contentious issue in this area. While stranded investment in this region is small compared to other regions, it may still be an issue. Where legitimate stranded costs exist, the allocation of those costs between utility stockholders and utility customers will need to be negotiated.

For some Northwest utilities with existing low-cost resources, the ability to charge market prices could lead to windfall profits. These gains also need to be divided between investors and consumers. The Council offers some guiding principles and cautions for a competitive electricity industry in Chapter 3.

Existing Northwest Electricity Resources

The foundation for the transition to more competitive electricity markets is the existing regional power system. This system is still dominated by hydroelectric power. Today, hydropower accounts for about 66 percent of the region's annual electricity supply. Since the Council's 1991 Power Plan, the region added 2,470 average megawatts of generating resources and conservation. Natural gas accounted for 57 percent of these additions, while conservation made up 21 percent of the new resources. Renewable resources, largely small hydropower and some biomass, accounted for about 17 percent of the additions. The preponderance of natural gas-fired resources in the recent additions to the system has raised concerns, but overall, the power system today embodies more resource diversity than did the system of 1991.

During the same period, the region also lost some electricity resources. The closure of the Trojan nuclear plant decreased energy supplies by about 725 average megawatts.

In addition, changes in how the hydropower system is operated, designed to protect endangered salmon and other fish and wildlife, have reduced the annual firm energy capability and limited the flexibility of the system to meet seasonal and hourly variations in electricity loads. The fish and wildlife protections reduced the firm energy capability of the region's hydroelectric system by about 850 average megawatts. The availability of low-cost electricity from the Southwest has helped the region offset the loss of energy from the increased flows for fish. This

draft plan devotes Chapter 4 to a description of existing regional energy resources.

Forecasts and Resource Trends

The opportunities and risks inherent in the transition to a more competitive Northwest electricity industry must be analyzed in the context of certain key factors. These include: future electricity use, the price and availability of natural gas, the amount of and cost of electricity in the West Coast power market, the availability and cost of new resources, and uncertainties regarding the Northwest hydroelectric system.

In the midst of the changes in the electricity industry, growth of the region's economy and the reliance of that economy on affordable and reliable electricity continue. Because future economic growth and electricity requirements are inherently uncertain, the Council prepares a range of economic and demand forecasts rather than a single point prediction. The mid-range of that forecast anticipates electricity use will grow by 1.3 percent per year, or approximately 280 average megawatts annually. This figure reflects an expectation that the region will experience relatively stable and even slightly declining electricity prices in real dollar terms as a result of lower gas prices and transactions in the West Coast power market.

Future gas prices are a major factor in the demand for electricity and the cost of the options to supply that demand. The emergence of a competitive natural gas market has resulted in declining prices and the expectation of ample supplies at comparatively low prices for the future. Again, because future gas prices are uncertain, the Council prepares a range of forecasts intended to encompass that uncertainty. The mid-range forecast suggests a real growth rate of 0.4 percent per year for residential and commercial gas prices, 1.1 percent for industrial use and 1.6 percent for electric generation. The lower end of the forecast range reflects expectations that future gas prices may be constant in real terms or even decline slightly.

Falling natural gas prices, the opening of transmission access and the availability of substantial excess generating capacity in California and the Southwest have combined to create a vigorous West Coast market for electricity. The availability of relatively low-cost power in this market makes it an attractive alternative to the Northwest's meeting demand growth entirely with the construction of new resources.

The Council's analysis finds that the West Coast market is likely to have substantial supplies of electricity costing around 2 cents per kilowatt-hour well into the next decade. Taking into account transmission constraints, if the Northwest were to rely on that market for as much as 3,000 annual average megawatts, the future cost of electricity to the region could be reduced by an average of $3 billion, compared to a strategy of building new resources to meet Northwest load.[1] The level of reliance on the West Coast market would be considerably greater than 3,000 average megawatts in some months and much less in others.

When new generating resources are required, the Northwest has numerous options. Natural gas-fired combined-cycle combustion turbines are the most likely choice. The Council estimates there are sites available that are capable of supporting an additional 7,400 megawatts of gas-fired capacity. These sites could supply 6,800 average megawatts of energy at costs of 2.7 to 3.3 cents per kilowatt-hour under the medium gas-price forecast.

The other generating alternatives analyzed in this draft plan include industrial cogeneration, coal-fired generation, forest thinning residue-fired generation, geothermal, wind, hydropower, landfill gas recovery, mixed wood residue burning, nuclear and solar. Currently, there are few generating alternatives that are cost-competitive with combined-cycle combustion turbines — only some industrial cogeneration, small amounts of new hydropower and a few biomass applications. However, there is a significant amount of cost-competitive conservation available. In the long run, coal-fired generation, some additional hydropower and biomass, wind generation at good sites and fuel cells are expected to become competitive. Gas-fired combined-cycle plants maintain their cost advantage even if a small carbon tax is assessed. If a large carbon tax is

[1] These present-value savings include estimates of costs and benefits that accrue beyond the 20-year planning horizon because many of these resources have lifetimes that extend beyond 2015. See Appendix H for more detail.

implemented, non-fossil fuel burning resources become cost-effective.

The region continues to face uncertainty with respect to the degree to which the operation of the hydropower system might be further constrained to protect fish or wildlife. The Council analyzed three alternative hydropower operations in comparison to the current system operation. Depending on the alternative, the capability of the hydropower system could be increased somewhat or it could experience substantial further losses in energy and capacity.

These changes are uncertain. There is no way to be certain if, when and to what extent new fishery recovery measures might be implemented. The important question is whether the region would make different resource choices in the near term in the face of this uncertainty. The Council believes the answer is no. The flexibility of the resource choices available to the region are such that, given sufficient lead time, the power system could adapt. However, some hydropower system changes could come at a significant cost. These issues are analyzed in Chapter 5.

Resource Issues in Competitive Markets

The advent of competitive electricity markets raises new issues with respect to the development of conservation, renewable resources and the consideration of environmental costs and benefits. These issues are explored in detail in Chapter 6 and described in the following paragraphs.

Cost-Effective Conservation

An objective of the Northwest Power Act is "to achieve cost-effective energy conservation." Despite the region's success in conservation development, significant cost-effective energy savings remain. This plan identifies 1,535 average megawatts of electricity savings that could be obtained over the next 20 years at an average levelized cost of 1.7 cents per kilowatt-hour. These savings are equivalent to the electricity generated by seven typical combustion-turbine power plants, and on average, they cost about two-thirds as much.

If this conservation is developed, the region's consumers would save $2.3 billion on their future electricity bills.[2] Consumers on their own will make some of the efficiency improvements identified in this plan. The region's utilities have indicated they will secure more. Together, consumers and utilities in the region will probably capture about a third of the available and cost-effective savings over the next 20 years. But, unless the remaining two-thirds of the savings are secured, the region will pay $1.7 billion more in power system costs and natural resource impacts than it needs to.

There are significant uncertainties inherent in any long-term look at the benefits of conservation. In addition to evaluating the conservation over a wide range of demand and fuel price forecasts, the Council looked at a wide range of alternative scenarios to determine how robust conservation's value was to the region. These scenarios included a reduction in the estimate of the available conservation, a dramatic improvement in the cost of generating technologies, and the sudden loss of 3,000 average megawatts of load. In the worst case, the value of conservation dropped as low as $830 million.

On the other hand, there is the risk that growing scientific evidence that global climate change is occurring could result in the imposition of measures to reduce emissions of carbon dioxide and other greenhouse gases thought to contribute to this climate change. If a carbon tax between $10 and $40 per ton of carbon dioxide were implemented in 2005, the value of the conservation would grow to between $3.2 and $6.1 billion.

In even extreme scenarios, the development of further cost-effective conservation is a positive long-term investment for the region. In the shorter term, however, conservation requires that the region incur somewhat higher costs today compared to buying electricity off the West Coast market. For conservation to be successfully developed in the future, the near-term costs must be weighed against its longer-term benefits.

Bonneville and the region's utilities have been the dominant forces behind the success of conservation efforts in the past. However, their role is changing because competitive pressures are making some utilities reluctant to spend money on conservation programs when some of their

[2] See footnote 1.

7

competitors do not make such investments. As a result, utilities cannot be expected to secure all the remaining conservation that is cost-effective.

Consumers are expected to save some electricity on their own, but there are significant market barriers that will likely limit this activity. Most Northwest utility resource plans include significant amounts of conservation acquisitions over at least the next four years. As a result, the region has some time to think through potential actions that might be appropriate for the long run.

This draft power plan is a reference tool, providing background on the utility industry transition.

In light of the potential benefits that may be at risk, the Council suggests that the Comprehensive Review and the states evaluate the costs and benefits of potential mechanisms to acquire conservation beyond what will naturally be developed in the market. The goal should be a competitive market that preserves as much of the conservation benefit as possible.

Some options include: waiting during this transition period to see what happens in the market; instituting a system benefits charge similar to the charge on phone bills that pays for the 911 emergency line; granting utilities distribution monopolies only if they offer conservation opportunities to their customers; or requiring that a certain amount of load growth be met by conservation. The last suggestion would result in efficiency trading, similar to emissions trading, which is already in practice in the electricity industry. Important qualifications for any mechanism are:

- That it be competitively neutral and not interfere with the market pricing of electricity;
- That it complement the emergence of competitive markets for energy-efficiency services;
- That it provide some symmetry between who pays and who benefits;
- That it be administratively efficient;
- That it use competitive mechanisms to the greatest extent possible; and
- That it incorporate mechanisms to ensure performance.

Renewable Resources

Renewable energy projects — those powered by the sun, wind, biomass, water and geothermal energy sources — are valued because they have generally favorable environmental characteristics, they offer diversity and flexibility, and they help ensure the long-term sustainability of the power system. An objective of the Northwest Power Act is "to encourage the development of renewable energy resources within the Pacific Northwest."

Renewable projects producing more than 420 average megawatts of energy have been developed since the 1991 Power Plan. These were primarily hydropower and biomass resources. This represents about 17 percent of all resources developed during this period.

Encouraging progress has also been made on the renewable resource confirmation agenda of the 1991 Power Plan. The confirmation agenda incorporates research, demonstration and development activities necessary to test renewable resources under Northwest climate conditions. However, declining wholesale electricity prices have resulted in near-cessation of the development of additional generating resources. This is consistent with the surplus of generating capacity on the Western electrical system, but it raises the question as to what type and level of renewables activity, if any, is desirable in this environment.

Analysis presented in Chapter 6 shows that, for the reasons noted above, few renewable resources are cost-effective in the near term. Even over the long-term, the large inventory of undeveloped renewable resources available to the Northwest has little expected economic value. However, the potential value of these resources would increase substantially if mitigation of carbon dioxide production were required to control global climate change. Such controls could raise the cost of competing resources.

But, even if carbon dioxide controls were needed in the future, there appears to be little economic value in developing renewables in

8

advance of need and cost-effectiveness. Such projects would require a substantial cost premium, they preclude the benefits of later technological development and are unlikely to produce significant economic benefit. This finding holds even with consideration of uncertain fuel prices, water conditions, demand growth and with adoption of relatively high carbon taxes.

Renewable resources are unlikely to be selected by utilities in a competitive market in the near term because they are not cost-competitive. However, key development and demonstration activities conducted now will help the region integrate such resources into the power system in the future.

Based on this analysis, a renewable resource strategy for the Northwest should focus on:

- Ensuring that the restructured electric power industry provides equitable opportunities for the development of cost-effective renewable resource projects;
- Ensuring that the renewable resource potential of the Northwest is adequately defined and that prime undeveloped renewable resources remain available for future development. This will require completion of key demonstration projects and additional resource assessment activities that are already under way;
- Supporting research and development efforts to improve renewable technology;
- Offering green power purchase opportunities; and
- Monitoring fuel prices, the global climate change issue and other factors that might influence the value of renewable resources.

More aggressive preparation for the development of renewables could be initiated if changes in these factors indicate that accelerated development of renewables is desirable.

Environmental Considerations

The Northwest Power Act requires quantifiable environmental costs and benefits of the power system be taken into account. While there are a number of these costs, for this draft plan, the Council has focused on the implications of possible global climate change.

There is increasing scientific concern that global climate change may be caused by emissions of greenhouse gases, most notably carbon dioxide. Carbon dioxide is produced in large quantities by power plants (and other energy equipment) that burn fossil fuels. Global climate change is a particularly difficult issue to address in power planning for several reasons. First, while the uncertainty regarding global climate change is narrowing, there remain questions regarding the existence, causes and magnitude of that climate change. The consequences of global climate change are also not well understood.

Second, global climate change is largely "external" to the Northwest. While the Northwest would experience the effects of any climate change that occurs, actions taken unilaterally by the region could not, in and of themselves, significantly affect the degree of climate change experienced by the region. Third, because of the large hydroelectric resources of the Northwest, the electric utility industry is not the most significant producer of greenhouse gases in the Northwest. Reductions in greenhouse gases might be accomplished at less expense in other sectors of the economy or in other parts of the world.

Still, the possibility that emissions of greenhouse gases might someday need to be controlled poses a financial risk. For example, a carbon tax could significantly increase the cost of electricity from fossil fuel power plants. If the type, magnitude and timing of possible carbon dioxide regulations were better known, certain near-term resource choices or, alternatively, investing in carbon offsets (e.g., tree planting) might be good hedges against carbon regulation. However, because of the lack of sufficient information, the Council cannot evaluate strategic responses to global climate change with the level of sophistication that it can bring to, for example, gas price uncertainties or future electricity requirements of the region.

Instead, however, the Council estimated the potential impacts of carbon dioxide control measures on the overall cost of providing electricity to the region, as well as on the relative costs of alternative resources. A range of possible carbon tax rates was used to represent the cost of carbon dioxide control measures. A carbon tax would raise the Northwest's total electricity bill

9

and increase the value of energy-efficiency improvements, renewable resources and nuclear power plants. The value of efficient natural gas-fired resources would also increase relative to other fossil-fuel resources.

Until the uncertainty regarding climate change is resolved by scientific consensus, and national and international policies respond to that consensus, the region can reduce its exposure to risk by:

- Avoiding investments in generating resources that are heavy emitters of greenhouse gases;
- Securing cost-effective conservation;
- Gaining experience with measures to offset greenhouse gas emissions, such as reforestation; and
- Considering the carbon dioxide offset value of the region's only operating nuclear plant.

The Role of the Bonneville Power Administration

The transition to a competitive electricity industry raises many issues for the Bonneville Power Administration. The reasons for this are several. First, as a wholesale utility, competition is already here for Bonneville and will probably become more intense. Second, Bonneville markets the output of a public resource, the Federal Columbia River Power System. Third, Bonneville plays an extremely large role in both generation and transmission in the region. And fourth, Bonneville is responsible for a number of public purposes besides power production, including discounts for rural customers, energy-efficiency programs, fish and wildlife recovery, and research and development.

As the region thinks about the role of Bonneville in a more competitive power industry, the questions raised by the principles for effective competition (in Chapter 3) must be asked and answered for Bonneville, just as for any other actor in the market. Does Bonneville have undue market power in transmission or generation? If so, how is that market power most effectively mitigated? More fundamentally, what is the appropriate role for a federal agency in a competitive market? Can it be a full competitor or must its role be somehow limited? Are there alternatives for ownership of Bonneville's assets or marketing rights that might be preferable, and, if so, what are some of the key issues that must be resolved? How should the benefits and risks of the system be allocated? How should the products of the system be marketed and priced? And how should the public purposes currently carried out by Bonneville be fulfilled? None of these questions has easy or clear answers.

Many argue that the Bonneville Power Administration, as currently configured, violates several of the principles for a competitive electricity market. It combines generation and transmission in one entity. It has substantial market power. It is not in a good position to deal with market risk. And it carries out several public purposes that may be difficult to support in a competitive wholesale power market, at least in the ways they have been supported in the past. At the same time, Bonneville is at the heart of the regional power system and embodies many of the values of the region.

Deciding the future role of Bonneville is a key task of the Comprehensive Review. A successful resolution of Bonneville's role is necessary to set the stage for an efficient and competitive regional power system that maintains the benefits of the Federal Columbia River Power System for the Northwest. Some of these considerations are explored in more detail in Chapter 7.

The Role of the Northwest Power Planning Council

Just as the role of the Bonneville Power Administration may be different in the future, the role of the Council in power planning is also in question. The Council's role of establishing a power plan to guide the resource acquisitions of the Bonneville Power Administration is moot if Bonneville is no longer acquiring resources. More generally, the role of a long-term regional power plan in an open market environment is questionable.

The Council's planning responsibilities were not intended as an end in themselves. These were intended to serve the overall purposes of the Northwest Power Act:

- To encourage conservation and efficiency in the use of electric power;

- To encourage the development of renewable resources;
- To assure the Pacific Northwest an adequate, efficient, economical, and reliable power supply;
- To provide for the participation and consultation of the states; local governments, consumers, customers, users of the Columbia River system and the public at large in:
  - — the development of regional plans and programs related to energy conservation, renewable resources, other resources, and protecting, mitigating and enhancing fish and wildlife resources;
  - — facilitating the orderly planning of the region's power system;
  - — providing environmental quality; and
  - — to protect, mitigate and enhance the fish and wildlife, and their habitat, of the Columbia River Basin.[3]

Through the Comprehensive Review, the region will be re-evaluating many of these goals and identifying mechanisms that can accomplish many of the key goals in a new utility context. A number of activities that the Council currently carries out in the course of developing and encouraging the implementation of its plans could be useful to the region, both during the transition to a more competitive utility industry and beyond. These activities include:

- Providing up-to-date information on future electricity demands, new generating and efficiency technologies, system operations and market forecasts;
- Serving as a broker for information exchange among utilities and others;
- Working at federal and state levels to resolve legal and institutional barriers to accomplishing regional goals;
- Providing impartial analysis of issues with a long-term regional perspective;
- Serving as a focus for analysis of the interactions between power and fish;
- Representing the interests of states and the public in power issues; and
- Being a regional convener of forums to resolve issues.

The restructuring of the Northwest's electricity industry may result in new roles that are appropriate for the Council. On the other hand, some of the existing and potential new roles might also be performed by others. There may still be a need for strategic thinking about the directions the electricity industry might take and the implications for the region. The Comprehensive Review will need to explore these and other possible Council roles. This draft plan elaborates on this question in Chapter 8.

Structuring the Competitive Marketplace

This draft power plan is long on analysis and short on conclusions. That is deliberate. It is designed to provide supporting information and analysis for the Comprehensive Review of the Northwest Energy System that was inaugurated in January 1996 by the governors of Idaho, Montana, Oregon and Washington. If this draft plan offers any advice, it is this: a deregulated electricity industry will not automatically deliver benefits to all consumers. Deregulation without attention to how competition is structured will not secure the low-cost and reliable electricity that has long been a mainstay of the Northwest's economy. Nor will competition necessarily secure the societal and environmental values this region has come to expect from its power system.

To achieve the full benefits of a competitive electricity market — lower power costs, innovation in both services and technologies, more choices for consumers, and attention to societal and environmental values — the Northwest will need to design its own structure for that market. No region in this country is more capable of doing that than the Pacific Northwest.

[3] 16 USC §839 (1)-(6).

CHAPTER 2

THE EVOLVING NORTHWEST ELECTRICITY INDUSTRY

What has been a regulated monopoly, is increasingly becoming a competitive market.

The Northwest's electric power industry is constantly evolving. That is nothing new. However, the pace of that evolution is new — a pace many believe is more rapid than at any time in memory. What has been a regulated monopoly, is increasingly becoming a competitive market. The three interacting factors driving change in the electric utility industry are:

- Wholesale electricity markets have become competitive due to regulatory changes that opened the industry to new players. This opening of the wholesale market, combined with lower overall prices for new sources of electricity, has resulted in significant pressure to open retail markets to competition as well.
- The availability of adequate supplies of low-cost natural gas has driven down the marginal cost of new generating resources. In addition, low gas prices have made it economical to operate at very low costs older gas-fired generating plants already in the West Coast system. This has created an abundance of low-cost electricity in the West.
- Finally, gas turbine technology has improved, resulting in a low-cost, efficient resource that can be built quickly and in relatively small increments to meet growing loads. This has significantly lowered the barriers to entering the power generation business, thus contributing to increased competition.

2-A. Competition in Electricity Markets

Probably no change is more important to the electricity industry and, by inference, to this draft power plan and the goals of the Northwest Power Act, than the evolution toward open competition among electricity producers and distributors. The principal benefits of opening an industry to the pressures of competition are to bring down prices and increase customer influence over the variety, quality and price of services the industry delivers. That has been the clear goal of the federal government's restructuring of both the natural gas and telecommunications industries. It is also the goal of restructuring in the electricity industry. A key lesson of restructuring in other industries is that *how* restructuring occurs and how regulation changes to accommodate increased competition are important.

The Traditional Regulatory Environment

The electric utility industry, until relatively recently, was made up of regulated monopolies — businesses that were, to a large extent, protected from competition. There was always some competition between electricity and competing fuels for such applications as heating and industrial processes, and even competition among electric utilities to attract new loads. But, historically, there was little competition from

non-utility generators of electricity, and almost no one competed to sell electricity within a utility's service territory. The utility's franchise was protected.

The Sources of Competition

The traditional regulatory environment reflected the realities of the industry as it existed years ago. It was an industry that required the construction of large, capital-intensive power plants and the rapid expansion of transmission and distribution systems. The regulatory system that evolved was a cost-based system that offered utilities the financial stability associated with a protected customer base. In return, utilities accepted an obligation to serve all customers in their service territory and regulation that prevents the exercise of monopoly power in the prices they charge. This regulatory framework generally holds true today for both the investor-owned utilities, which are regulated by state utility commissions, and the local public utilities, which are regulated by locally elected boards or commissions.

In the Pacific Northwest, the Bonneville Power Administration is a special case in that it is a federal marketer of wholesale power. Bonneville sells the electricity generated at federal Columbia River hydroelectric dams and one nuclear plant, the Washington Public Power Supply System's WNP-2, to retail utilities and to some industrial and government customers that are served directly rather than through utilities. The federal power marketer is required by law to sell to its public agency customers at cost. Because Bonneville markets the power generated at the federal Columbia River dams, those costs were, until recently, well below the cost of alternative power supplies. This meant Bonneville had a secure market for its inexpensive electricity. Furthermore, most of Bonneville's customers are "full requirements" customers, that is, Bonneville supplies all their power needs.

Regulatory Policy — Wholesale Competition

In 1978, the utility industry's near-monopoly on power generation began to crumble. Congress passed the Public Utility Regulatory Policies Act (PURPA) to promote renewable resources and cogeneration and to reduce utility reliance on imported oil. PURPA created a class of non-utility generators that had the right to sell the output of their power plants to utilities at the price the utilities would have to pay to develop their own resources — their so-called "avoided cost." This was an attempt to mimic market-based economics, and it encouraged developers to compete to supply utility resources. While these provisions stimulated wholesale competition, the law was very specific in prohibiting these new producers from selling to retail customers.

The next major federal regulatory change occurred in the National Energy Policy Act of 1992 (EPAct). This legislation created a class of wholesale generators that are exempt from the legal and financial requirements of the Public Utilities Holding Company Act of 1935. Exempt wholesale generators have the ability to structure themselves any way they want, although they are still subject to rate-regulation by the Federal Energy Regulatory Commission when they sell their power in interstate commerce. The 1992 Act further eased entry into the wholesale generation business, but prohibited these exempt generators from making sales to retail customers.

The drafters of the 1992 legislation recognized that transmission access was a necessary condition for a fully competitive wholesale

power market. If there is to be true competition in generation, generators need to have a way of getting their power to market under terms and conditions that do not discriminate among the owners of generating resources. EPAct gives the Federal Energy Regulatory Commission the ability to require owners of transmission systems to provide access to others wishing to use the transmission system. Again, the legislation was clear that it was addressing transmission access for wholesale transactions only, and that the Commission did not have the authority to require wheeling to retail customers.

A key lesson of restructuring in other industries is that *how* restructuring occurs and how regulation changes to accommodate increased competition are important.

In March 1995, the Commission released what has come to be known as the electricity "mega-NOPR" — its notice of proposed rulemaking implementing the open access provisions of EPAct. Although the rules are not yet final, they give a relatively clear picture of the Commission's intent. They require utilities under the Federal Energy Regulatory Commission's jurisdiction owning both generation and transmission to "unbundle" these functions — separating decisions about generation and transmission within the corporate structure and charging separately for these products.

The utilities are also to adopt transmission tariffs that guarantee "comparability," i.e., charges, terms and conditions for transmission services that are comparable to what the utility applies to itself for these services. The intent is to frustrate the ability of transmission owners to use their transmission to give their own resources an advantage.

The anticipated Federal Energy Regulatory Commission rules will also require establishment of sophisticated information networks that can provide real-time information on the availability and price of transmission capacity. Some industry observers have suggested that functional unbundling and requirements for comparability will not be sufficient to ensure non-discriminatory open transmission access, and that pressure will build for utilities to divest themselves of their transmission assets.

Opening access to the transmission system fosters the need for coordination in the planning and operation of regional transmission grids. The Commission has proposed the formation of regional transmission groups, composed of the users, suppliers and the state regulators of transmission in given regions, to coordinate the planning, expansion and operation of transmission capacity. Many utilities in the Northwest are members of the Western Regional Transmission Association (WRTA) and the Northwest Regional Transmission Association (NRTA).

The Federal Energy Regulatory Commission also indicated its intent to address what it perceives to be a transition issue that will have to be resolved — the so-called "stranded investment" problem. Wholesale stranded investments are those that were made to serve wholesale customers who then take advantage of open transmission access to get service from another supplier. If the investing utility cannot recover its investment from its remaining sales, that investment will be stranded.

There are few examples of potential wholesale stranded investments in the Pacific Northwest. One example could be the investment in the Washington Public Power Supply System nuclear power plants, two of which are uncompleted and have never produced power, and another that is operating, but which produces electricity at above the current market price. Fiscal Year 1995 operating costs of the Supply System's WNP-2 were about 3.5 cents per kilowatt-hour, which are higher than the cost of power from new gas-fired combustion turbines, and much higher than current wholesale power prices. The Supply System has set ambitious targets for reducing operating costs. It remains to be seen how successful they will be.

The financing of these plants was backed by the Bonneville Power Administration to meet what was then perceived to be the need for new

resources to serve public agency and direct service customers. The capital costs of these plants were melded with Bonneville's low-cost hydropower, causing rates to climb by about 500 percent. Even so, until the advent of competitive pressures, Bonneville could recover its costs, and until recently, keep its rates below the avoided cost of new resources. However, Bonneville's ability to recover those costs fully in today's low-cost wholesale market *and* fully carry out its other public responsibilities is far from clear.

Because Bonneville is exclusively a wholesale utility, it is already fully exposed to competition.

The changes in the wholesale market brought about by the forces described above have been dramatic. Independent power producers have become the important developers of new generation. More than 100 power marketers have been licensed by the Federal Energy Regulatory Commission. These marketers may not own any generating resources, but they can purchase supplies from a number of producers and put together packages of power products to meet the needs of their customers.

An active spot market has evolved, with spot prices at COB/NOB (the reference point for West Coast power transactions at the California/Oregon border and the Nevada/Oregon border) published daily in *The Wall Street Journal*. Some utilities have established power trading floors, and the New York Mercantile Exchange is moving toward establishing a futures market for electricity.

The most compelling effect of the competitive changes in the utility industry is that the market price of electricity has fallen. There is clear evidence from the results of various competitive bidding processes that competition among potential developers and marketers has driven down prices. To some extent, this is the consequence of surplus capacity on the West Coast that can be priced at the operating cost plus a small markup. In the past, that surplus capacity might not have entered the market because it was too expensive. Low gas prices and open transmission access are making that capacity a major factor in today's wholesale power market. Many of these developments parallel the experience in the restructured natural gas market.

The development of the wholesale electricity market has been particularly problematic for Bonneville. Because it is exclusively a wholesale utility, it is fully exposed to wholesale competition. Its heavy debt burden for nuclear plants, high operating costs of the one operating nuclear plant and increased costs of salmon recovery efforts are colliding with the falling prices in the wholesale market. The result is that many of Bonneville's direct service industrial and public agency customers are seeking or have obtained power from other suppliers.

In its 1996 Initial Rate Proposal, Bonneville appears to have been successful in putting together a competitive five-year rate proposal. To do so required extensive cost-cutting efforts and efforts to pare back or eliminate some of its other responsibilities. To many, the apparent conflict between Bonneville's public agency responsibilities and the requirements of the competitive market raise questions about Bonneville's continued existence in its historic form. This is discussed more fully in Chapter 7.

Retail Competition

The availability of low-cost power in the wholesale power market is creating pressure for retail competition, i.e., a situation in which individual factories, businesses and even homes might choose who generates their electricity and what power products they buy. Electricity would be distributed to consumers over the same power lines as serve them today, but one consumer might be served by one utility, while his or her neighbor might be served by a different utility, an independent power producer or a marketer. Many believe that the full benefits of a competitive industry will only be realized when retail customers have full access to power markets.

The authority to allow retail competition lies

with state and local regulators — legislatures, state utility commissions and the governing bodies of consumer-owned utilities. Not surprisingly, the pressure for retail competition is greatest where retail rates are highest. California embarked on an ambitious effort to restructure its electricity industry to allow retail access first to large customers and then to all customers within a few years. Although not yet complete, it appears almost certain that some form of retail competition will come about in that state.

California is the most ambitious example of competitive restructuring, but there are other states in which retail competition is also being actively considered. Michigan has an experiment in retail wheeling under way. Massachusetts has recently adopted a goal of providing retail customers with the choice of suppliers. The state also adopted principles for the restructured industry and for the transition to it, and has set a schedule for implementation, as has Wisconsin. Rhode Island also has adopted a set of principles for industry restructuring.

While these examples are perhaps the most prominent, regulatory commissions and legislatures across the country are beginning to address the issue, even in areas that do not have particularly high rates. At least 12 states outside the Northwest are investigating the introduction of retail competition.

Given the relatively low electricity rates in the Northwest, this region would seem an unlikely place for pressures for retail access, but even small reductions in price for large customers can translate into significant monetary savings. As a result, some industrial customers in the Northwest are using their market power to obtain the benefits of low wholesale prices. These relatively few large customers are causing much of the electricity industry, even in the Northwest, to act as if retail access were a given.

Puget Sound Power and Light in Washington has customers that have been granted revised rate structures as a result of their attempt to get direct access to the power market through other suppliers. A major customer of Seattle City Light also has sought direct access to the power market. While these are the most public examples, it is likely there are numerous other instances in the region in which utilities and their customers are wrestling with the trade-offs between opening up retail access or making special rate accommodations to retain major customers. Two state utility commissions, Washington's and Montana's, have undertaken inquiries on competition, and the Washington commission has published "Guiding Principles for an Evolving Electricity Industry."[1]

The effects of anticipation of competition are also evident. Utility efforts to "right-size" and cut costs are prevalent. Mergers and acquisitions are under way in the region and across the country, as utilities try to reduce costs through economies of scale and otherwise achieve competitive advantages. At least two major Northwest utilities have been public in expressing their concerns that they would face stranded investments if retail competition develops. Most utilities have expressed concerns about regulatory pressures to undertake conservation, renewable resource development and accommodation of environmental concerns that might raise their rates if their potential competitors — independent power producers, marketers and so on — are not subject to such pressures. They fear such rate increases will mean customers move to other suppliers.

2-B. Restructuring of the Natural Gas Industry

Changes in the natural gas market have been a major factor in the competitive evolution of the electricity industry. In fact, changes in the gas industry may have far more implications for the future of the electricity industry than any other recent development. Not only do low natural gas prices affect future demand for electricity and the cost and characteristics of electricity supply, but the development of a restructured natural gas commodity market may foreshadow similar changes for the electricity market.

In the early 1970s, natural gas was regulated from the wellhead to the end user. Consumers' gas needs were met by their local distribution company, much as electric utilities serve their customers' needs now. The local distribution company had its gas supplies delivered to the city gate by natural gas pipeline companies that acquired the

[1] Washington Utilities and Transportation Commission, "Guiding Principles for an Evolving Electricity Industry," Docket No. UE-940932, December 13, 1991.

gas supply, transported it to the city gate, and shaped it to meet demand.

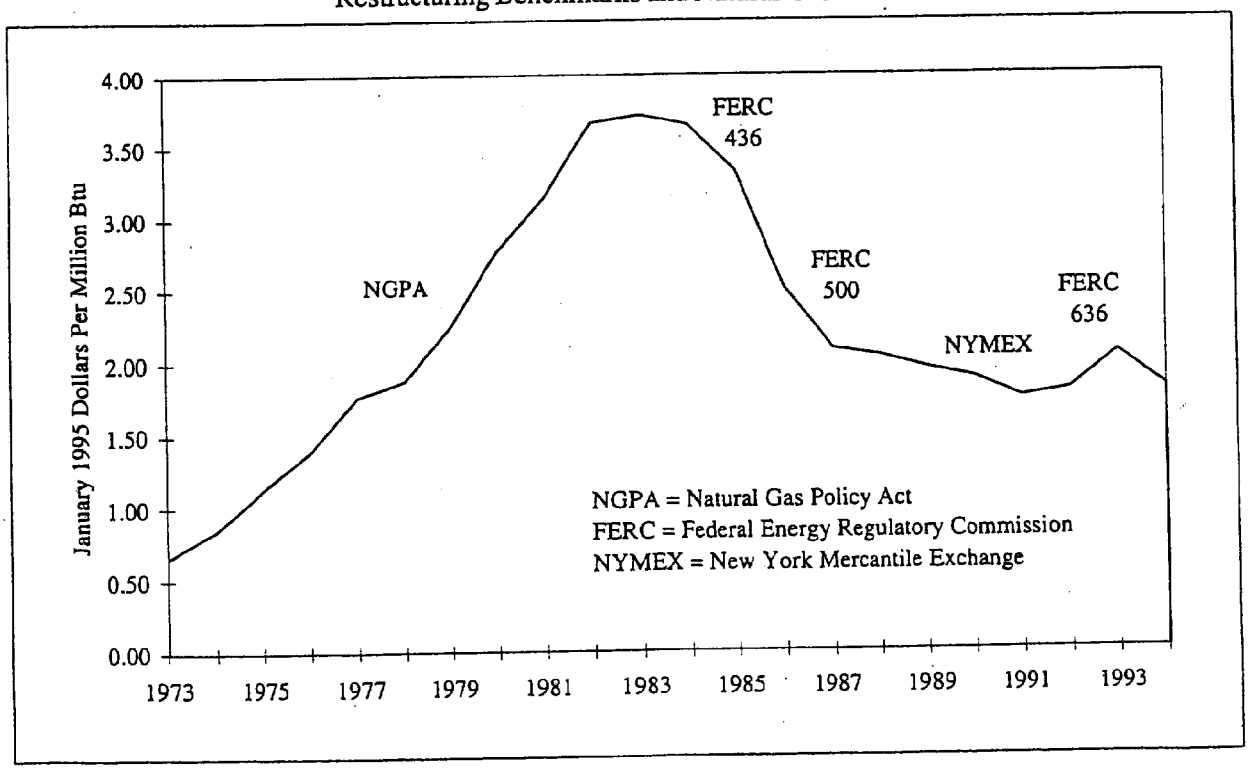
Today, pipeline companies do not own or purchase any gas. They provide transportation and shaping services on an unbundled basis. Local distribution companies and many individual customers now purchase their own gas supplies, transportation, and other services as needed. There is now a fully developed natural gas commodity market. Financial instruments, such as natural gas futures, allow local distribution companies and customers to manage the risk of natural gas price fluctuations. A whole new industry of natural gas marketers now exists to help customers acquire gas supplies, transportation and other services on a bundled or separate basis to fit individual customer needs.

These dramatic changes occurred through a series of restructuring initiatives beginning with the Natural Gas Policy Act of 1978 and culminating in Federal Energy Regulatory Commission Order 636 in April 1992. (See Figure 2-1.) The regulatory changes gradually deregulated natural gas prices at the wellhead (Natural Gas Policy Act, 1978 and Natural Gas Wellhead Decontrol Act, 1989), opened up pipelines for use by anyone wanting to transport gas (FERC Order 436, 1985 and Order 500, 1987), and eliminated the purchase and sale of natural gas by pipeline companies (FERC Order 636, 1992). Order 636 also put into place pricing principles that provided incentives to utilize pipeline capacity more efficiently.

In April 1990, the New York Mercantile Exchange (NYMEX) began trading natural gas futures contracts, signaling the beginning of a complete natural gas commodity market. Finally, legislated restrictions on the use of natural gas for electricity generation contained in the Powerplant and Industrial Fuels Use Act were repealed.

Taken together, these changes have put into place the necessary elements for an economically efficient natural gas market. These elements include direct access to markets by both users and suppliers, a larger number of buyers and sellers participating in the market, proper pricing structures in the regulated portions of the industry, and price discovery and risk mitigation mechanisms provided by the spot and futures markets for the natural gas commodity.

Figure 2-1
Restructuring Benchmarks and Natural Gas Prices



The West Coast market has a significant amount of inexpensive electricity at its disposal right now.

The results have been dramatic decreases in natural gas prices and growing estimates of natural gas supply. Between 1983 and 1987, average wellhead real natural gas prices in the United States fell from $3.70 to $2.08 (both in January 1995 dollars), a drop of 44 percent. Since 1987, natural gas prices have averaged $1.89, while displaying price cycles that typify a competitive commodity market. Figure 2-1 illustrates natural gas price trends and restructuring actions over the past 24 years.

Until very recently, these lower price levels were considered unsustainable. Such low prices were not expected to garner sufficient new supplies of gas to meet growing demands. However, the establishment of a more competitive market has led to adoption of new technologies that have greatly increased the success, and reduced the cost, of natural gas exploration and development. In only 10 years, the estimates of ultimate potential gas resources have increased fivefold.[2]

The theories and models of natural gas supply that were developed during the energy crisis of the 1970s and early 1980s have proven to be far too pessimistic. As a new understanding of the nature of natural gas supplies and markets is being developed, forecasts of future natural gas prices have been falling every year for the last dozen years. It is no longer conventional wisdom that natural resource prices will necessarily rise in real terms over time as those resources are produced. This change is reflected in the Council's forecasts of natural gas prices, described in Chapter 5.

Lower gas prices have meant that gas-fired steam generating plants, primarily used by California utilities to meet peaking needs, can now be run economically with gas. These existing generators are already available, they simply have not been used extensively in the past due to the high price of their fuel. The availability of low-cost gas for these plants has meant that the West Coast market has a significant amount of inexpensive electricity at its disposal right now. The extent of that market is described in Chapter 5.

2-C. Gas Turbine Technology

Changes in the structure of the gas industry coincided with improvements in gas-fired power plants. Gas turbine technology has benefited from military and aerospace research and development. This has resulted in improved efficiency and reliability. New gas-fired power plants also are smaller than conventional thermal power plants, so more of their components can be assembled in factories. This makes their onsite construction faster. These two effects combine to reduce their overall costs. In addition, natural gas-fired combined-cycle combustion turbines have greatly reduced local and global environmental impacts. Consequently, they are easier to permit and require less permitting lead time. The dramatic benefits of today's low-cost gas-fired generation and the key characteristics of a gasified coal plant, as described in the 1991 Power Plan, are compared in Table 2-1.

In addition to the direct effect of providing electricity that is inexpensive and less-polluting, the characteristics of gas-fired combustion turbines have also lowered the barriers for entry into the power generation business. It is no longer necessary to undertake the risks associated with very large, long lead time, capital-intensive generating resources to enter the generation business. Thus, one of the conditions for a competitive generation market — ease of market entry — is within reach.

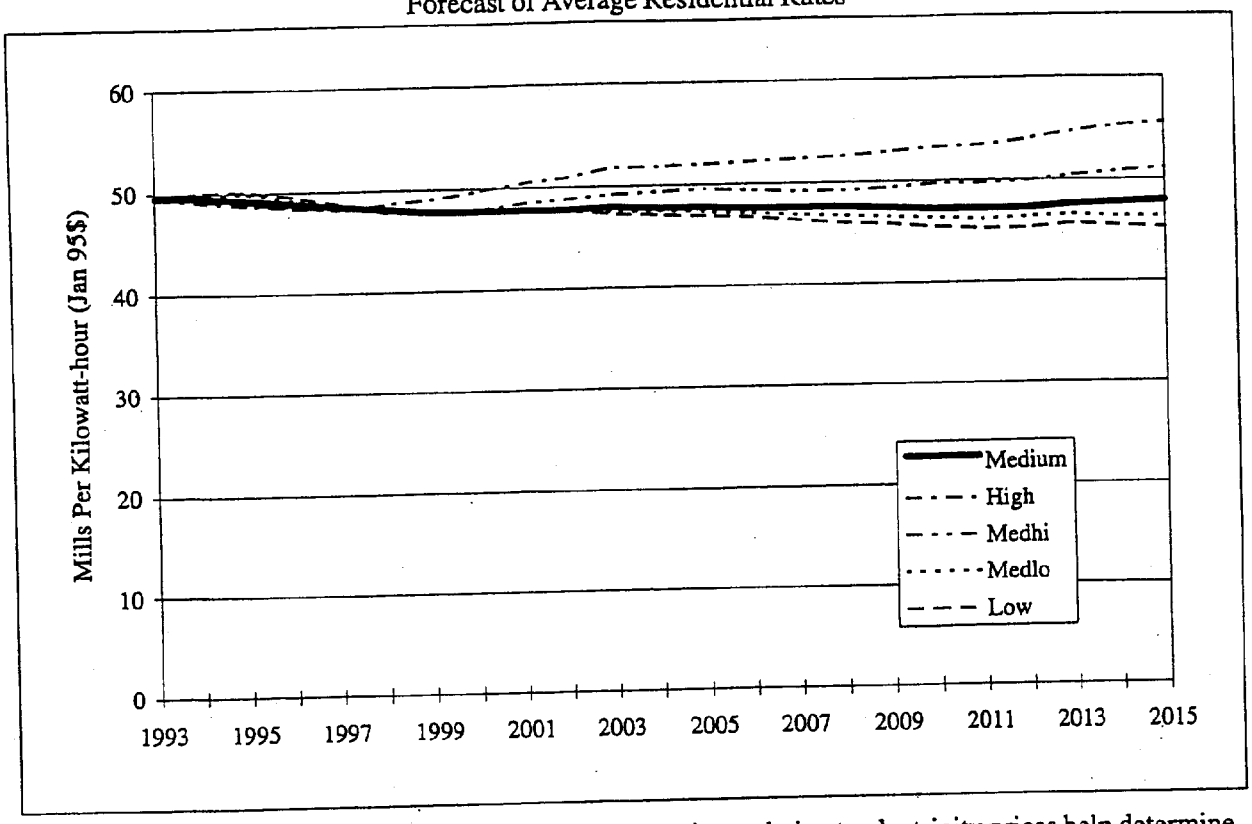
[2] For an excellent discussion of the changing views on oil and gas supplies see, William L. Fisher, "How Technology has Confounded U. S. Gas Resource Estimators," *Oil and Gas Journal*, Oct. 24, 1994, pp. 100-107.

18

Table 2-1
Marginal Resource Comparison: Draft Plan Compared to 1991 Power Plan

Resource Characteristics	1991 Plan Gasified Coal	Draft Plan Gas-Fired Turbine	Change
Size (MW Capacity of Typical Plant)	420	228	46% Smaller
Lead Time (years)	7	4	43% Shorter
Capital Cost ($/kW)	$2,520	$684	73% Lower
Availability (%)	80	92	15% Greater
Efficiency (%)	36	47	30% Greater
Levelized Cost (cents/kwh)	6	3	50% Lower
Particulates (T/GWh)	0.07	0.03	57% Less
SO_2 (T/GWh)	0.04	0.02	50% Less
NO_X (T/GWh)	0.50	0.07	85% Less
CO (T/GWh)	0.02	0.02	Similar
CO_2 (T/GWh)	985	497	50% Less

Figure 5-2
Forecast of Average Residential Rates



opportunity to improve the use of electricity generating capacity throughout the West Coast power system. The opening up of the wholesale power market will facilitate that improvement. As a result, fewer new resources will be required, and those that are required will be less costly than in the past. The average regional electricity price forecasts are shown in Table 5-1.

5-B. Natural Gas Price Forecasts

Natural gas prices have two significant impacts on electricity consumption. First, natural gas prices relative to electricity prices help determine which fuel consumers will select for key pieces of energy consuming equipment, such as space and water heaters. Second, the price of natural gas significantly determines the cost of gas-fired combustion turbines, which in turn is a key resource for new electricity generation. As a result, natural gas prices influence both the amount of electricity consumed and the cost of supplying new resources.

As described later in this chapter, the restructuring of the natural gas industry has resulted in a vibrant market, producing dramatic decreases in natural gas prices and a growing estimate of

Table 5-1
Average Regional Real Retail Electricity Price Forecasts
(1995 cents Per Kilowatt-hour)

Forecast Case	1994	2005	2015	Growth Rate 1994-2015
Low	4.2	3.92	3.76	-0.5 %
Medium Low	4.2	3.87	3.80	-0.5 %
Medium	4.2	3.89	3.91	-0.3 %
Medium High	4.2	4.05	4.19	0.0 %
High	4.2	4.30	4.65	0.5 %

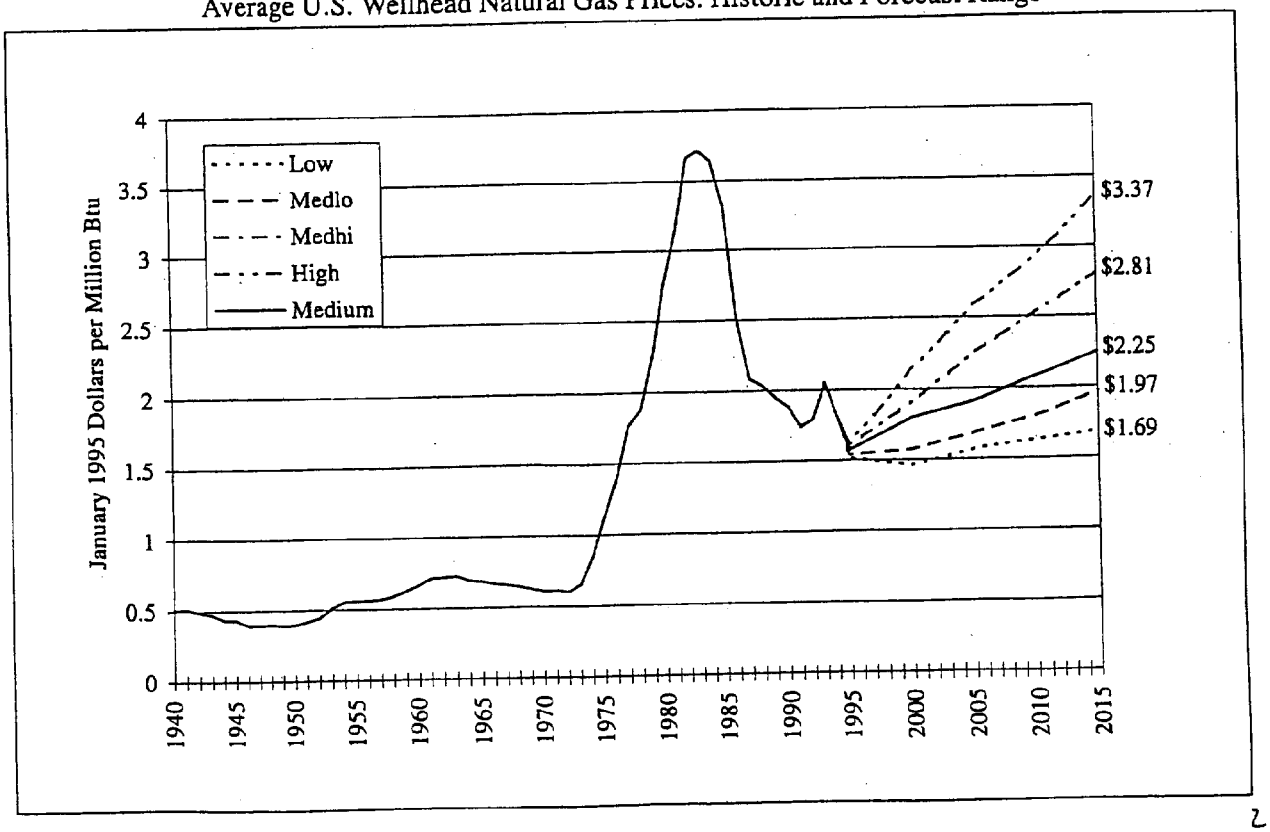
natural gas supply. Ranges of natural gas and other fossil fuel price assumptions have been declining and becoming narrower since the Council developed its 1991 Power Plan.

The demand forecasts reflect an expectation that the region will experience generally stable electricity prices.

Based on several national gas price forecasts and advice from the Natural Gas Advisory Committee, the medium-case forecast assumes that average real U.S. gas prices will grow at about 1.0 percent annually, increasing from the 1994 level of $1.84 to $2.25 by 2015. The lower cases recognize that real prices may remain flat or even decline slowly over time, and the higher cases explore the possibility that we have become too optimistic about the natural gas future as a result of recent patterns. However, even in the high forecast, gas prices reach only $3.37 compared to a high case of $6.00 contained in the Council's forecast of natural gas prices in October 1992. Figure 5-3 illustrates the historical average U.S. wellhead price and the Council's forecast.

While national trends in natural gas prices are usually indicative of regional trends, they are not a good indication of actual gas prices in this region. The Pacific Northwest gets most of its gas supplies from Canada and the U.S. Rocky Mountains. These are the two lowest-cost natural gas producing regions in North America. As a result, prices of natural gas delivered into the pipelines serving the Pacific Northwest are substantially lower than prices in most of the country. For example, on October 2, 1995, gas delivered into the U.S. Pacific Northwest from Canada was about $.90 per million Btu, and gas delivered into the pipeline serving the Pacific Northwest from the U.S. Rocky Mountains was $1.04 per million Btu.

Figure 5-3
Average U.S. Wellhead Natural Gas Prices: Historic and Forecast Range



21

At the same time, at the Henry Hub in Louisiana, the pricing point for NYMEX gas futures contracts, gas was $1.65 per million Btu. The Northwest's pricing advantage fluctuates with market conditions, but a $.50 advantage is fairly typical.

The low price for Canadian natural gas, which is primarily produced in Alberta and British Columbia, results from the large relatively less-developed gas resources, limited pipeline capacity to move gas out of Canada, and long distances to major gas markets outside the Northwest. These conditions are expected to continue to benefit the Pacific Northwest with relatively low gas prices for the forecast period, although the advantage relative to national prices is expected to decline to some degree in most forecast cases.

The prices of natural gas to final users depends on the cost of transporting and distributing the gas to the point of use. For smaller customers, these costs are a larger share of the delivered cost of natural gas. Because pipeline and distribution costs are not expected to escalate rapidly in real terms, the growth rates of prices to residential and commercial customers are moderated. The medium forecast used for this draft plan is summarized in Table 5-2. The complete range of forecasts may be found in Appendix C.

5-C. The Western Power Market

The electricity forecasts indicate that loads could grow by about 5,920 average megawatts by the year 2015, if medium economic growth occurs. There are a number of resources that could be used to meet this load growth, including the West Coast power market, which currently has an abundance of low-cost resources.

The Northwest has traditionally thought of itself as an island of cheap electricity with links to the rest of the West. These Western connections can be used to increase reliability; to dispose of surplus nonfirm hydropower (which was the primary purpose for constructing the Intertie lines between the Northwest and Southwest); and to make exchanges that do not involve net sales of firm energy (e.g., transactions where the Northwest supplies peak capacity and the buyer returns the energy in its off-peak hours or season). Such exchanges were exempted from restrictions under the Northwest Preference Act, which was passed with the initial construction of the Intertie, because they were consistent with the concept of an island of cheap electricity. The closest these ideas came to being challenged were calls for increased reliance on gas-fired combustion turbines or purchases from California gas generation, which could be extensively displaced by nonfirm energy to meet firm Northwest loads. Until very recently, these notions were basically intact.

Several things have dramatically changed this perspective in the last few years. The first is the general assumption that the fall in gas prices in the mid-1980s, described earlier in this chapter, was not an anomaly. The second is the still-unfolding consequence of the Energy Policy Act of 1992 (EPAct), which allowed the Federal Energy Regulatory Commission (FERC) to require open access to the nation's transmission systems and legitimized major non-utility power suppliers, marketers and brokers as players in the nation's power markets. These factors are driving the industry toward a wide-open wholesale power market.

Table 5-2
Natural Gas Prices to End Users
(January 1995 Dollars per Million Btu)

Case and Sector	1994	2005	2010	Growth Rate 1994-2015
Residential	5.21	5.28	5.62	0.4 %
Commercial	4.43	4.49	4.83	0.4 %
Industrial	2.30	2.57	2.88	1.1 %
Electric Generation	1.82 (est.)	2.14	2.52	1.6 %

SERVICE DATE
DEC 1 3 1995

BEFORE THE WASHINGTON UTILITIES AND TRANSPORTATION COMMISSION

In the Matter of the Commission's Notice of Inquiry:	)	DOCKET NO. UE-940932
	)	POLICY STATEMENT
Examining Regulation of Electric Utilities in the Face of Change in the Electric Industry	)	Guiding Principles for Regulation in an Evolving Electricity Industry

Background: On December 16, 1994, the Washington Utilities and Transportation Commission initiated an inquiry under Docket No. UE-940932 entitled Examining Regulation of Electric Utilities in the Face of Change in the Electric Industry (NOI). After reviewing comments and reply comments submitted by 40 interested organizations and individuals, the Commission on August 14, 1995, issued a draft policy statement pursuant to RCW 34.05.230 and WAC 480.09.200 entitled Guiding Principles for an Evolving Electricity Industry. At that time the Commission requested comment on the eight principles comprising the draft policy statement. The Commission received comments, criticisms, and recommendations from 17 participants in the NOI. The Commission has reviewed these comments and used them to revise the draft policy statement and produce a final set of policy principles.

Statement of Policy: The Commission issues this policy statement pursuant to WAC 480.09.200. The statement consists of eight principles which should guide adaptation of the Commission's exercise of its regulatory authority to the more competitive circumstances facing the state's electricity industry. The statement does not constitute a formal order binding upon the Commission or parties that may come before it in formal proceedings. Rather, the statement serves to demonstrate the current opinions held by the Commission concerning the expansion of competition in the electricity industry. The Commission intends to use these principles in exercising its general regulatory duties and responsibilities and in developing its opinions and judgements concerning specific regulatory issues which it may be required to address.

Guiding Principles for Regulation in an Evolving Electricity Industry

1. Electricity service should be available to customers at prices that are both reasonable and affordable. The Commission's fundamental responsibility is to ensure that, where this service is provided by an investor-owned monopoly, customer needs are met at a cost that is fair, just, reasonable, and not unduly discriminatory. The monopoly provider is entitled to rates that are sufficient to provide it the opportunity to recover and earn a fair return on its investment dedicated to public service. However, where electricity service can be made available at affordable prices established through competition that is both efficient and that treats all customers fairly, competition should be accommodated and encouraged.

2. Non-economic bypass and the inappropriate shifting of costs of the electric system between or among customers do not constitute fair and efficient competition, are contrary to the public interest, and should be avoided. Customers of continuing monopoly service should benefit, or at least not be harmed, from choices made by customers with access to competitive options.

3. The long-term integrity, safety, reliability, and quality of the bulk electric system and retail electricity service should not be jeopardized.

4. Consumers should be afforded a broad range of choice in electricity service and pricing options. Service terms and pricing options should reflect customer needs, as well as the reasonable costs and consequences of these options. Unbundled service options should require appropriate conditions, including notice provisions and limitation of service obligations, to ensure that customers see the full costs as well as the full benefits of their choices. All classes of customers should have access to a basic level of reasonably priced and reliable service.

5. Development of competitive electricity markets should not undermine public policies favoring environmental protection, energy efficiency, resource diversity, and technological innovation. If these policies are to be realized, a host of parties will have important roles to play including utilities, new market entrants, electricity customers, and environmental regulatory and other agencies of government including the Commission. Approaches that encourage development of markets for energy efficiency and renewable generation equipment should be emphasized.

6. Transitional regulatory decisions concerning specific situations and responses to competitive circumstances should be made carefully in a manner that avoids creating an advantage or imposing a disadvantage upon any group of competitors, or inhibiting the "natural" evolution of efficient markets.

7. The opportunity for members of the public to voice their views in the planning, choice of resources, siting, and impacts of the electricity system should be preserved.

8. Traditional regulation of monopolies serves to protect consumers by establishing fair prices free from monopoly abuse. Traditional regulation also protects utility shareholder interests by setting rates that provide an opportunity to recover and earn a fair rate of return on utility investment made to provide the public with reliable service. Traditional notions about the meaning of this "regulatory social compact" have received substantial criticism from both utilities and regulators over the last two decades. Interests of customers should continue to be balanced with the opportunity for shareholders to earn fair returns. When justified by the public interest, regulatory policy should seek flexible ways to reduce both shareholder and ratepayer exposure to potentially stranded costs. However, regulation cannot and should not be expected to guarantee utilities will, in all circumstances, be made entirely whole for generation or other costs that are determined through actual and fair competition to be stranded or uneconomic.

Changes in the Statement: In light of the rapid pace of change in the electricity industry and the state, regional, and federal regulatory and policy issues that may affect the electricity industry in Washington, the Commission anticipates that it may become necessary to modify or revise the principles established in this policy statement. Under such circumstances the Commission intends to distribute any modifications or revisions for comment by all interested parties before amending the statement.

DATED at Olympia, Washington this 11th day of December 1995.

WASHINGTON UTILITIES AND TRANSPORTATION COMMISSION

Sharon L. Nelson

SHARON L. NELSON, Chairman

Richard Hemstad

RICHARD HEMSTAD, Commissioner

Wm. R. Gillis

WILLIAM R. GILLIS, Commissioner

SERVICE DATE
APR 22 1998

STATE OF WASHINGTON

WASHINGTON UTILITIES AND TRANSPORTATION COMMISSION

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April 22, 1998

NOTICE OF TERMINATION OF NOTICE OF INQUIRY

Re: Notice of Inquiry: Examining Regulation of Electric Utilities in the Face of Change in the Electric Industry
Docket No. UE-940932

TO ALL INTERESTED PERSONS:

This report will serve to document the results of the Commission's Notice of Inquiry, *Examining Regulation of Electric Utilities in the Face of Change in the Electric Industry;* close this inquiry; and identify areas where the investigation of issues will continue as the Commission moves forward in a formal review of its rules specifically addressed in the inquiry. The purpose of this inquiry was to gather information about structural change in the electricity industry; to identify the implications of industry changes for utility regulation; and to produce recommendations concerning specific rules and regulations currently used by the Commission. In particular, the inquiry focused on the Commission's regulatory rules and procedures concerning least-cost resource planning, competitive bidding for resources, and review of the prudence of utility expenditures.

The pace and scope of change in the electric industry has been faster and broader than the Commission could have imagined. While interested persons were responding to questions posed in the inquiry, regulated electricity companies began bringing a variety of filings to the Commission for approval in response to "competitive events," including special contracts, open access tariff filings, and mergers. To put interested persons on notice how it would adapt regulatory authority to the more competitive circumstances facing the state's electric industry, the Commission adopted eight principles. The inquiry thereafter focused on ways in which the policy principles could be achieved as the electric industry evolves into a more competitive marketplace.

In the intervening two and one-half years, it has become apparent that changes in the electric industry will be driven by legislative and economic forces beyond the control of the Commission. In addition, Governor Gary Locke has issued Executive Order 97-02 requiring all agencies to review their administrative rules, a process that offers the Commission, the electric companies, and interested persons an opportunity for a review of the rules governing least cost planning and competitive bidding.

In light of these changes, the Commission is closing the electric notice of inquiry. This memorandum summarizes the status of the inquiry and makes recommendations for subsequent steps.

The Commission extends its appreciation to all persons who participated in the notice of inquiry, and by that participation informed both the substance and quality of this inquiry. We acknowledge the substantial time, effort, and resources dedicated to preparing and filing comments throughout the process, and we look forward to continuing an open dialogue with all interested persons as the electric industry continues to evolve, and the Commission continues to evaluate the tools it uses to fulfill its statutory mission in the face of that evolution.

Section I of this report outlines the procedural history of the Commission's inquiry from its inception to the present. Section II highlights key developments related to competition in electricity service that have occurred subsequent to the inquiry. Section III summarizes the Commission's review of the areas of specific focus of the inquiry.

I. Procedural Background

The Commission issued its notice of inquiry (NOI) on December 16, 1994, and invited comments and observations of general trends concerning competition in the electric industry, and the implications of those trends for regulation. In addition, the NOI solicited comments regarding the Commission's regulatory rules and procedures pertaining to least-cost resource planning, competitive bidding for resource acquisition, and review of the prudence of utility expenditures.

The Commission received comments from thirty-eight persons. Seventeen persons submitted comments in a subsequent round of reply comments, including three who did not respond in the initial comment period. Commentors represented a broad spectrum of electricity interests, including the three jurisdictional investor-owned electric utilities (IOUs), the Public Counsel Section of the Office of the Attorney General, the financial community, industrial and residential customers,

environmental and low-income public interest groups, publicly-owned utilities, independent power producers (IPPs), labor, and utility stockholders. Copies of submittals from both the initial comment round and the reply comment phase of the NOI are available from the Commission upon request.

On August 14, 1995, the Commission issued a letter summarizing the general substance of comments received in the inquiry. The letter noted that the Commission did not have sufficient information, at that time, about the emerging context of the industry to either refine existing or develop new regulatory tools to address resource planning, resource bidding, and prudence determination. The letter proposed and requested comment on a set of interim policy principles to guide the Commission's decisions during the transition to a more competitive electric industry. Seventeen persons submitted 70 pages of comments on those proposed principles. After considering the comments received, the Commission on December 13, 1995, amended and adopted the principles as an Interpretive Policy Statement. The Commission indicated it would use these principles to inform judgments about filings and issues brought before it as customers and jurisdictional companies adapt to emerging competition in the electric industry. In addition, the Commission informed the participants that it would defer decisions concerning regulatory tools affecting resource planning, resource bidding, and prudence review until a clearer picture of industry structure and regulatory context emerged. Near term focus was placed on factors and processes external to the Commission, including rule making at the Federal Energy Regulatory Commission (FERC) and developments affecting the role of the Bonneville Power Administration (BPA).

II. Subsequent Developments

Subsequent to adoption of the policy principles, the Commission addressed a number of specific filings, proposals, and issues related to competition in electricity service. Power contracts related to special customer circumstances were approved for several industrial customers of Puget Sound Power & Light Company (Puget). PacifiCorp filed such a contract for its largest industrial customer in Washington. Puget filed, and the Commission approved, a tariff permitting it to offer partially market-based prices to its general industrial customer class. Puget Sound Power & Light Company and Washington Energy Company completed a corporate merger into Puget Sound Energy, Inc. (PSE), to include their retail natural gas and electric operations. The Washington Water Power Company (WWP) received approval to serve a large industrial customer located in Northwest Washington, formerly served by a public utility district, as a full requirements customer of BPA; the provision of service has been delayed, pending resolution of complex transmission arrangements.

WWP requested and received approval to continue its non-bypassable distribution level charge to support conservation and low income weatherization programs. PSE received approval for, and implemented, a similar distribution level charge.

Retail open access pilot projects affecting all customer classes are currently offered by both PSE and WWP. PacifiCorp requested and received approval for a banded rate tariff to participate in WWP's retail access pilot for large industrial customers. WWP recently received approval to implement a portfolio access pilot for residential and commercial customers, allowing those customers a choice of energy options without having to change energy service providers.

In 1996, the FERC issued its Orders 888 and 889 regarding open access transmission tariffs and standards of conduct associated with wholesale transmission and generation transactions. These rules have established the framework for a competitive generation market, at least at the wholesale level. Several issues arising from FERC's asserted jurisdiction over rates and services pursuant to these Orders are currently pending in federal court.

Also during 1996, the four Northwest governors convened a study group to perform the Comprehensive Review of the Regional Energy System. This study was completed in December 1996, with recommendations delivered to the governors on the role of BPA and the structure of the region's wholesale and retail power systems. These recommendations asserted that the region's state and local jurisdictions should move actively toward electric service competition at the retail level, with appropriate safeguards to protect consumer and public purposes interests. Concerning consumer driven retail competition, the recommendations included a strong regulatory role in customer protection involving licensing of generation providers, continuing price regulation of distribution functions, and consumer information and education. In addition, the report recommended open access pilots to identify problems and solutions for delivering the benefits of competition to all customer classes.

In 1997, Governor Locke issued Executive Order 97-02, requiring state agencies to conduct a four year review of their "significant" rules. The Commission has developed and submitted a plan and schedule for reviewing its rules. The review of the competitive bid rules (WAC 480-107-060,070) and the least-cost plan rule (WAC 480-100-251) is scheduled to be completed by the end of 1999. During this review, the Commission will conduct an open process in which interested persons will have the opportunity to participate.

Several bills impacting the electric industry were enacted by the Washington Legislature during its 1998 session. One bill requires IOUs to submit unbundled cost studies to the Commission, and requires large public utilities to file similar studies with the State Auditor by September 30, 1998. The bill also requires these filings to include a report on service quality and reliability data. The Commission and the State Auditor are required to report to the Legislature by December 1, 1998, on the cost studies, the reliability studies, and an examination of the ways to disclose and label generation fuel mix issues. Another bill requires utilities to adopt certain basic consumer information and protection policies. The bill also calls for a comprehensive study performed together with the Department of Community, Trade, and Economic Development (DCTED). A third bill requires utilities to make available bi-directional metering equipment for customers who install site specific renewable generation equipment of less than 25 kW.

III. Commission Review of the NOI Comments

Since the initiation of the NOI, the trend toward greater consumer choice in electricity service, at both the wholesale and retail level, has accelerated and broadened. As the Commission noted in its August 14, 1995 letter on the status of the NOI, this trend derives from federal and regional policy initiatives and developments in the wholesale power market. In view of this firmly established trend, the Commission believes that it is necessary to consider modifications to existing rules governing resource planning and resource acquisition. These modifications will be addressed in greater detail during the review of rules and the rule making process scheduled to take place through 1999 as part of our compliance with EO 97-02.

A. Least-Cost Planning Rule

1. Background

This rule, WAC 480-100-251, requires utilities regulated by the Commission to file a plan every two years describing the mix of both supply-side and demand-side resources that will meet the future needs of customers at the lowest cost to the utility and its ratepayers. Preparation of these plans involves forecasting utility loads over a long period (typically 20 or more years); evaluating available supply-side and demand-side options for meeting that load; and preparing both an integrated resource plan (IRP) to develop the lowest cost mix of these supply-side and demand-side resources and a near term action plan consistent with the long term plan.

The rule was adopted on May 19, 1987, with the expressed purpose of ensuring that each electric utility regulated by the Commission meets its load with a least-cost mix of supply-side and demand-side resources. PacifiCorp and WWP complied with the rule by submitting plans every two years. Puget filed plans through 1992; following its merger, PSE's most recent plan is being prepared and is expected to be filed in Spring 1998.

Although a review process is not a formal part of the rule, the Commission and Staff review plans for consistency with the requirements of the rule, and notify the utilities of any deficiencies or concerns regarding the substance of the plan. While information and analysis included within the plans are considered as part of rate making and other proceedings, the Commission does not prospectively approve expenditures included in the action plan.

The existing rule was developed in the context of monopoly utility service of a bundled product consisting of electricity generation and delivery (transmission and distribution). In this context, the least-cost planning process provides an opportunity for the utility's monopoly customers, along with the public and Commission Staff, to influence utility decisions. As the monopoly service provider, the utility acts as an exclusive agent for its customers. The least-cost planning process provides a means for the customers and the public to provide input on decisions made by the utility on their behalf. The rule also creates a "level playing field" for evaluating investments in energy efficiency and investments in supply-side resources, and a context for the utility to evaluate the relative environmental characteristics of competing resource choices.

2. Positions of Commentors

The majority of comments in the NOI favored preserving the least-cost planning rule and the planning process. Nearly all commenting persons also offered advice about how the rule and practice could be modified to better function in a more competitive and less monopoly industry. The only commentor recommending the rule be eliminated was PSE, which argued that long term planning is unnecessary in a competitive industry. Both WWP and Pacific supported least-cost planning, but argued it should be made less prescriptive and should accommodate each utility's strategy for responding to competitive opportunities. Both WWP and Pacific said planning should function largely as an educational process.

The Washington State Energy Office (WSEO), Northwest Power Planning Council (NPPC), low income advocates, Public Counsel, environmental advocates, and the International Brotherhood of Electrical Workers (IBEW) argued that the planning rule should be retained and even strengthened. They argued that least-cost planning is not command-and-control regulation; rather, it provides an important framework for balancing issues, making decisions, and explaining those decisions. These groups recommended that the plans developed by utilities should be treated more formally by the Commission than the current acknowledgment. Several recommended that the plans be approved – at least as to planning methodology.

Independent power producers (IPP) recommended that planning be retained, and that a long-term view of resource development be expected of the utilities and be documented in publicly-available resource plans.

Industrial customers and associations made no specific recommendations regarding least-cost planning, except that it should not involve the assignment of "environmental costs" that would ultimately be reflected in prices. As part of their general argument in support of open access to non-utility suppliers for large customers, the Washington Industrial Customers for Fair Utility Rates (WICFUR) suggested that least-cost planning should apply only to the "full requirements" customer loads.

3. Discussion

The Commission will consider various revisions to its least-cost planning rule during its formal review of rules and rule making process, scheduled to take place through 1999. Where service continues to be provided by a monopoly, or by a utility with significant ability to affect the choices of service available to customers, the rationale and importance of least-cost planning remains. While the initial steps toward competition in retail service are being taken in the electricity service industry in Washington, the industry is not effectively competitive in any existing retail markets. The number of customers with alternatives to utility electricity supply may expand beyond the pilot programs currently offered; however, under any scenario, a large proportion of consumers will likely continue to receive bundled, traditional utility service for some time into the future. Even those customers who may be able to choose alternative electricity suppliers likely will continue to take distribution and other network service from a monopoly utility.

Consequently, while we believe that the least-cost planning process continues to be desirable and important, we also acknowledge that modifications to the current rule may be appropriate to better reflect the potential influence of future competition.

The Commission believes revisions to the rule may be appropriate for the purpose of focusing its application to monopoly utility-supplied services, bundled or unbundled. Consequently, a major emphasis should be on planning for generation and energy efficient resources and distribution services for loads that continue to be served on a monopoly bundled basis, and only on distribution services for those loads to be served on an unbundled basis. Additionally, such planning also should focus on maintaining reliability of the distribution network. This framework follows the recommendation made by WICFUR, but explicitly extends the scope of planning to include the monopoly services of the distribution network.

A number of commenting persons also recommended that the planning process could be improved if the Commission were to take more definitive action on plans placed before it. For example, the Opportunity Council argued that the Commission should approve actions identified in action plans. This could constitute a form of preapproval of utility actions. Other persons, including Public Counsel and WSEO, recommended that the planning process be strengthened by approving the planning methodology and/or the objectives identified in the plans rather than specific expenditure levels.

The Commission understands that some persons would like to use the planning process to reduce the uncertainty of utility management decisions and subsequent regulatory review. However, the Commission believes that the major value of the planning process lies in 1) providing an open process to discuss utility decisions; 2) a consistent means for understanding and evaluating alternatives; and 3) a document accessible for reviewing and evaluating the rationale and bases for utility management decisions. Development of the plan and subsequent review by the Commission cannot and should not substitute for actual management of the company's capital and other assets. Nor should the process substitute for the Commission's subsequent review in rate cases and other proceedings of how those decisions have or have not served the public interest. The planning process should be an information generating tool that is flexible, not a rigid and prescriptive tool that constrains either the companies from fulfilling their responsibility to shareholders or the Commission from fulfilling its responsibility to customers and the public.

Consequently, the Commission believes that it should not modify its review of plans to constitute any form of preapproval of utility expenditures. The information generated in plans should continue to be used as an important part of the information relied upon by the Commission in rate making or other proceedings related to utility service. In addition, the Commission intended the plans' information to be used by the utilities for their business decisions to ensure they provide sufficient capacity,

quality, and services necessary for the customers who rely upon them in their role as monopoly distribution companies. To ensure that this information is as meaningful and useful as possible, the Commission will review the methods employed to develop the long-term and short-term plans in greater detail as part of its rule making, to ensure that the plans are comprehensive and balanced in terms of aligning business decisions with public goals. The Commission continues to believe that accountability for the actions and decisions identified in the plans rests with the companies.

Finally, a number of persons including WWP and PacifiCorp suggest that the two year filing requirement for IRPs may be too prescriptive. Plans may be more useful and constructive if they fit the actual time frame of major management decisions. PacifiCorp has proposed that information can be made more current through plan updates produced and filed in between major resource modeling and planning cycles. The Commission believes this notion has merit, and therefore will consider changing the filing requirements for various components of the plans as it undertakes revisions of the planning rule.

The Commission expects that the role played by Staff in the planning process at a minimum will include 1) participating in technical advisory groups; 2) reviewing and commenting upon the methods and analytical tools used in the plans; and 3) monitoring utility circumstances to determine when, or if, plan updates should be required. Staff should be able to make judgements about whether the plan and the action plan are logically and consistently derived based upon the planning methodology and analytical tools. The Commission does not expect Staff to make judgements about the advisability or appropriateness of any specific utility management decision or project expenditure level. Once a plan is filed, the Commission expects Staff to make an expedited review, based upon their ongoing participation in the plan's development.

The Commission, in its review of plans, will continue to identify the specific issues and particular details on which we will request the company to develop information and to conduct analysis through the planning process.

B. Competitive Bidding Rule

1. Background

The Commission adopted competitive bidding procedures to implement the provisions of the Public Utilities Regulatory Policies Act of 1978 (PURPA) and FERC regulations pertaining to sales and purchases of power by electric utilities from qualifying small power producers or qualifying cogenerators. Through bidding, payment by electric utilities to these qualifying facilities (QFs) of "avoided costs" is established through a "market" process, rather than an administrative one. WAC 480-107-060 requires each electric utility to file a request for proposals (RFP) every two years, within 90 days of filing its IRP.

In 1989, the Commission adopted rules which require jurisdictional electric utilities to solicit bids from generation and conservation suppliers (WAC 480-107-060,070). These rules had two objectives: ensuring that regulated companies do not pay too much for purchased power resources, and ensuring that utilities compare opportunities in competitive wholesale markets with the cost of utility owned projects. These rules were modified in 1994 to synchronize the timing of solicitations with the completion of least-cost plans, and to permit negotiation of bid prices.

In 1995, WWP submitted a "compliance" filing in lieu of an RFP which identified a request for a zero-megawatt resource block. In its filing, which the Commission ultimately approved, WWP identified no impending need for new firm electric resources, consistent at that time with its most recently filed IRP, and therefore proposed that the Company forego formal solicitation for new resources. WWP contended it did not wish to send false signals to the marketplace causing potential resource suppliers to expend time and financial resources preparing bid proposals at a time when WWP was experiencing a surplus of both energy and capacity. In 1996, following the submittal of its IRP, PacifiCorp submitted a similar compliance filing in lieu of its RFP for precisely the same reasons.

Recently, WWP requested that the Commission grant a waiver of the portion of the competitive bidding rule requiring the issuance of an RFP, reiterating its claim that the Company has no immediate resource need. The Commission approved that application, but required WWP to file its avoided costs for public comment, to preserve compliance with PURPA.

2. Positions of the Commenting Persons

The competitive bidding rule evoked the most criticism of all the regulatory tools addressed in the NOI. The independent generators (IPPs) were the only strong supporters of the bidding rule. The Natural Resources Defense Council (NRDC) also supported the rule, and Pacific and the American Wind Energy Association (AWEA) recommended establishing "green RFPs" to meet renewable targets, which they also recommended. IPPs argued that if bids do not result in a winning proposal, a utility should be held to its bid or its avoided cost standard for any subsequent resource acquisition. A number of persons supported elimination of the bidding rule, including WSEO, NPPC, Puget, Mr. Rogers, Mr. Warwick, Puget Shareholders, and WICFUR (as to non-core service). Generally, the bidding rule process was characterized as "too prescriptive" given the number of opportunities now available in the wholesale power market. A common theme among commentors was that utilities should not be forced to consider non-utility generation and told how to choose between competitive options.

3. Discussion

As a means of implementing PURPA, the Commission established the bidding rule as a preferred forum for avoided cost determination, replacing what was previously known as administratively-determined avoided costs. The Commission's intent in establishing a market test for determining these avoided costs was to generate bids between PURPA developers that were lower than the administratively-determined costs, and to allow the utilities to purchase only the supply of resources needed. The Commission agrees with many of the commentors that recent developments in the wholesale market have reduced the need for such a test, and that competitive bidding for resources may not fit well with the current industry structure. However, as long as PURPA requirements remain in place, the Commission believes this approach is preferable to the administrative method when new resources are being acquired. The Commission believes the process of bidding should become less administratively burdensome, and will re-examine the role of competitive bidding in its upcoming rule review, given the status of PURPA at that time. In the meantime, the Commission will continue to be flexible in considering exceptions to the bidding rule when the utilities face no impending need for new firm resources.

C. Prudence Review

1. Background

Each of the IOUs bears the burden of demonstrating the prudence of new resource acquisitions to the Commission. A demonstration of prudence includes a showing that 1) the selection of each resource was necessary and reasonable, 2) the costs of acquisition were appropriate based upon what a reasonable board of directors and company management decided given what they knew or reasonably should have known to be true at the time the decision was made, and 3) the costs were regularly evaluated. The prudence review is currently conducted by the Commission exclusively in general rate increase cases.

2. Positions of Commentors

Given the introduction of competitive risk into the industry, most persons who provided comments suggested that prudence reviews be made less complicated and litigious. Many (WSEO, NPPC, IPPs, Puget, and industrial customers) proposed that resource acquisitions be either pre-approved or convened in a separate proceeding closer in time to decisions than a general rate increase case. WWP suggested that specific prudence reviews be replaced with performance-based rate making. Pacific appears to agree, but did not make this specific recommendation. The financial houses generally argued for better management of regulatory risk by reducing or streamlining the prudence review process. Puget shareholders argued that the Commission should only review power contracts as to "due diligence," and that this should be accomplished in thirty days.

The only persons to support the current prudence review process were WICFUR and Public Counsel. Both indicated a willingness to consider alternatives.

3. Discussion

The Commission continues to believe that prudence evaluation remains an important tool to ensure that utilities are not indifferent to cost or to the consequences of poor decision-making. General rate increase proceedings were established as the forum in which to evaluate prudence, because issues pertaining to the need and price of a resource acquisition can only be determined in a forum where each decision can be viewed in conjunction with all other of the company's resource decisions.

The Commission believes there is no other currently available forum, sufficient in both rigor and scope, within which to make this determination. For that reason, the Commission does not believe preapproval of particular resource acquisitions is appropriate, as this would inappropriately shift the risk of those decisions from utility management to rate payers.

Consistent with the discussion of the least-cost planning process, the Commission does not support any recommendation that would constitute any form of preapproval of utility expenditures. However, the Commission will continue to consider suggestions that do not rise to the level of preapproval of resource decisions.

With this report, the Commission closes the Notice of Inquiry, *Examining Regulation of Electric Utilities in the Face of Change in the Electric Industry*, Docket No. UE-940932. The Commission defers consideration of formal changes to its least-cost planning and competitive bidding rules until its upcoming rule review and rule making process, scheduled to take place through 1999. We invite and welcome the participation in those rule makings of the industry and observers who have informed this NOI.

Sincerely,

ANNE LEVINSON
Chair

RICHARD HEMSTAD
Commissioner

WILLIAM R. GILLIS
Commissioner