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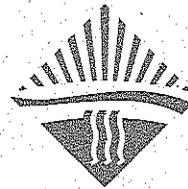
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Renewable Northwest Project

200207 010

July 3, 2002

Mark Walker
Director, Public Affairs
Northwest Power Planning Council
851 S.W. 6th Avenue, Suite 1100
Portland, OR 97204

RE: Comments on Council Document 2002-07

Dear Mark:

On behalf of the Renewable Northwest Project, I am submitting the enclosed comments to the Council's draft fuel price forecast for the Fifth Northwest Conservation and Electric Power Plan.

Please let me know if you have any questions or concerns about our comments.

Very Truly Yours,

Ann E. Gravatt
Senior Policy Associate

Enclosure

JUL 09 2002

**Comments on Council Document 2002-07:
DRAFT FUEL PRICE FORECASTS
FOR THE 5TH
NORTHWEST CONSERVATION AND
ELECTRIC POWER PLAN
April 25, 2002**

Submitted by Renewable Northwest Project
Rachel Shimshak, Executive Director

July 3, 2002

INTRODUCTION

Thank you for the opportunity to submit comments to the Council's Draft Fuel Price Forecast for its Fifth Power Plan. We believe the message of the Forecast paper is extremely important. We urge the Council, in its final version, to highlight the likelihood that the volatility of natural gas prices will increase over what it has been historically. The development of the Fifth Power Plan should include a discussion of decision-making under this uncertainty and a discussion of how to create a portfolio of resources to help manage this price risk.

Background

The price of natural gas has fluctuated dramatically over the past 30 years, and it is likely to continue to fluctuate, perhaps more dramatically, in the future. The historic fluctuations can be partly seen in Figure 7 (p.17) of the draft report. Between 1973 and 1985, annual average wellhead prices in year 2000 dollars ranged from about \$.60 per million Btu (MMBtu) to about \$4.00 per MMBtu, a range of \$3.40 per MMBtu. Further, a range of about \$2.40 per MMBtu can be seen in the graph for the 11-year period, 1985 through 1996, and again for the five-year period from 1996 through 2001.

Even these fairly large ranges over short periods of time do not reflect the full range of prices faced by end-users during the same time period. The prices in Figure 7 are annual average wellhead prices, and as such do not reflect variations within the year or variations in delivery charges.¹ Delivered prices in spot markets in the Northwest over the last 3 years or so have been as high as \$20 or more per MMBtu, and as low as \$2 per MMBtu.

To be sure, the variation in historic prices can be explained. Federal controls on gas use created artificially high prices around 1985-86. Predictions that prices would come down

¹ In addition, because the prices are shown in year 2000 dollars, the historical range appears to be less dramatic than if it had been shown in current year's dollars.

once the prohibitions on use of natural gas contained in the Fuel Use Act were removed turned out to be true, and prices dropped by 1996. But those people who thought that removing the constraints of the Fuel Use Act would lead to continuing low prices of natural gas were surprised by the rapid escalation of prices driven by market forces and perhaps market power.

Although we can easily explain why prices have fluctuated historically, we can never know what they will do in the future, or what forces will drive prices up or down. Will the boom in construction of natural gas-fired generators continue and raise gas prices to unprecedented levels? Will a new form of generation displace natural gas fired generation as the resource of choice? Or, will some unknown event have an affect that we cannot even consider at this time? History and intuition tell us that the potential range may be great. Yet prices in real-terms may be flat over the next 30 years. We simply cannot know.

SPECIFIC COMMENTS TO IMPROVE THE PAPER

The major question that the Forecast paper and the Fifth Northwest Power Plan that it will feed into must answer is; *“How does a potential user of natural gas or power factor potential price uncertainty into decisions moving forward?”*

The paper recognizes the potential volatility discussed in the introduction to these comments. For example, the author states on page 11:

“With the natural gas industry operating at narrower reserve margins, these cyclical patterns might become more severe and lead to growing natural gas price volatility.”

And again on page 15,

“We do not really expect future prices to follow a smooth pattern as reflected in the forecasts; they will be cyclically volatile, but the forecasts only reflect expected averages. There is, in fact, reason to expect increased volatility in natural gas prices because competition has narrowed reserve margins in the industry making prices more vulnerable to changes demand due to weather or other influences.”

We believe that these two sentences should be the message for this paper and the subsequent resource analyses of the 5th Plan. Resource developers and potential purchasers of natural gas or natural gas-fired power should expect that the volatility of natural gas prices might increase over what it has been historically.

We are concerned that the forecasts themselves, shown in Figure 7, might obscure the importance of the Council’s message about the likely volatility of gas prices. These forecasts, produced using the best techniques available (described in the paper), supported by strong advisory groups, and consistent with the forecast of other respected

entities can be enchanting. They can leave one with a comfort level that may be unwarranted, creating a false sense of certainty from which decisions will be made.

We believe that Figure 7 could take on a life of its own as the Council's forecast of natural gas wellhead prices, and as such, could become the basis of uninformed decisions, again in spite of what a careful reading of the paper would imply. The forecasts shown in Figure 7 display a rather bright future for natural gas users. The forecasts of natural gas prices seen in Figure 7 cover a range of only \$1.40 (\$2000) over the 20-plus year forecast period. This range is less than the range (also in \$2000) that occurred over many shorter historical periods also shown in Figure 7. In all scenarios, all prices displayed over the entire forecast period show a *decrease* in real terms from annual average prices that we have already seen -- in 2001 and 1985. Real prices of natural gas over the next 20-year period might turn out to be lower than they have been, but should they be lower in all cases of a forecast?

The message of this paper is important. The utility industry has made a habit of building resources based on today's common wisdom of what the future would hold, only to be proven wrong at great expense to ratepayers. We saw this, for example, in the rush to build nuclear plants when they were considered "too cheap to meter." It is easy to think that the re-regulated market for wholesale power will prevent this kind of action; that producers who cannot rate base plants will be more cautious about building for an unknown future. But, this ignores the buyers of power, who may not be as sophisticated about future unknowns, or may see no option other than to buy power from whatever is being built, or be swayed by optimistic forecasts of natural gas prices to sign long-term power contracts. This paper should consider all stakeholders in the region --from producers to the end-users of power and/or natural gas. Every stakeholder needs to know how volatile this future is.

It has been common practice in regional Power Plans to look at a range of price forecasts for fuels from low to high and to determine how each set affects the desired portfolio of resources. However, no one of the forecasts will prove to be the one that finally materializes. But, how do we model outcomes any other way? It is tempting to model a random set of gas prices that have volatility built into them to reflect what we have seen over the last 30 years, for example. This could turn out to be a Herculean task, requiring random contracts terms, random demand shifts, random extreme weather conditions, etc. This type of modeling effort may be worth doing simply for the insight one can gain from doing it, but it will likely be far removed from reality, and will perhaps not yield a concrete framework for action.

We believe it would be more fruitful and more realistic in the Fifth Plan to look at and discuss decision-making under an uncertain future, and to develop a portfolio of resources that allows one to hedge risks through diversification of investments, through modularized investments, and other related strategies. Staff at the Lawrence Berkeley Laboratory (LBL) has attempted to quantify the value of renewable resources as a hedge against unknown future prices of natural gas. The Council may be interested in the results of that paper as it drafts its Fifth Power Plan.

The LBL staff paper can be found at:

<http://eetd.lbl.gov/ea/EMS/reports/50484.pdf>

We look forward to working with the Council and its staff in the development of this approach as it puts together the plan in the months to come.
