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Weekly Energy Status Report

1. Northwest Power Pool Status (WA, OR, ID, MT, WY, UT, No. NV, BC, AB)

- Power Pool peak load (Tuesday, 7/01): 43,993 MW
- Reserve margins were within comfortable ranges for Northwest Power Pool utilities.

2. Electricity, Petroleum and Natural Gas Prices

- Weekly Range at Mid-C: \$38.5-54.0 per MWh, Ave. = \$42.9
- Approximate change from previous week \$+4.5 per MWh
- "Normal" price range, before 5/00 \$20-\$40 per MWh
- Petroleum, West Texas Intermediate: \$30.17 per barrel (year ago: \$24.47)
- Seattle gasoline price (6/30) \$1.61 per gallon (year ago \$1.51)
- Natural gas, Sumas Hub: \$4.78 per million British Thermal Units (year ago \$2.75)
- Approximate change from last week. Oil: +1.0 per barrel; Nat. gas: +0.22 MMBtu

3. California Electricity Situation

- CA ISO Alert Status
 - A stage 1 alert (7% reserve margin) was declared on May 28, 2003.
 - A stage 2 alert (5% reserve margin) was declared on July 10, 2002.
 - Most recent rotating blackouts: Tuesday, May 8, 2001
- Energy News Headlines from California and the Nation
 - Canada is losing ability to fulfill US gas needs (New York Times, June 25)
 - In natural gases future, experts see more high prices and growing imports (The New York Times, June 27)
 - FERC targeting 60 power sellers (Sacramento Bee, June 26)

4. River and Snowpack Information (Updated June 30, 2003)

- Observed May stream flow at The Dalles: 78.4% of average
- Observed May precipitation above the Dalles: 85% of average
- Observed 2003 snow pack as of May 7: 89% of average
- The latest forecast of Columbia River stream flows this January through July is 89.3 million acre feet, 83 percent of normal: National Weather Service Northwest River Forecast Center.

5. Energy Conservation Achievement (Updated Mar. 10, 2003)

- **State Agencies:** From January to December 2002 electrical usage was 7.6 % less and natural gas usage was 4.1% less compared to the same period in 2000.

6. Winter Load Loss/Reservoir Impacts/Fish (Updated April 21)

- Federal reservoir system storage: 46% full: Precipitation Oct. – to date, 93% of normal.
- Estimated winter (2002/03) load loss probability of 1%

7. Power Exchanged: (July 1, 2003)

- Average flow of power during the last 30 days
 - California (exported to) 3,591 MW
 - Canada (exported to) 601 MW
 - Net power export: 4,192 MW

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Canada Is Losing Ability to Fill U.S. Natural Gas Needs

By BERNARD SIMON

For years, Canada has been the safety valve for the United States natural gas market, pumping supplies across the border to ease shortages and keep prices reasonably stable. But the recent surge in gas prices suggests that the days when Americans could look north for relief are over.

Barring a serious slump in the American economy that would significantly reduce demand, industry experts say, the United States will need every cubic foot of Canadian gas it can get, and then some. But Canadian production is, for the moment at least, at its maximum: it will be at least five years before Canada will again be in a position to act as a swing supplier, the experts say.

From now until 2008, "the best the Canadian industry can do would be to keep production flat," said Mark G. Papa, chairman and chief executive of EOG Resources of Houston, one of the few gas producers to increase output from its Canadian wells last year. A fall of 1 to 2 percent over that time is more likely, Mr. Papa said.

Tight gas supplies in the United States pose a threat to economic growth, said Alan Greenspan, chairman of the Federal Reserve, which lowered interest rates today in response to general weakness in the American economy. Mr. Greenspan told the House Energy and Commerce Committee on June 10 that the country could not expect Canada to make up for falling production in the United States, and that new facilities were needed to import liquefied natural gas from Asia, the Middle East and the former Soviet Union.

On Thursday, Spencer Abraham, the secretary of energy, will meet with top government and industry officials and members of Congress to discuss tight natural gas supplies at a conference in Washington organized by the National Petroleum Council, an advisory group that reports to Mr. Abraham.

North American natural gas prices are quoted in dollars per million British thermal units, a measure of raw energy content. On the New York Mercantile Exchange, they peaked at more than \$6.50 earlier this month, up from about \$3.65 a year ago; gas for July delivery traded yesterday at \$5.76. Stored supplies of natural gas are near record lows in the United States, and have also fallen sharply in Canada.

Canada now supplies 16 percent of United States' gas, double its share a decade ago. "The Canadians have come to the rescue on the supply front," said Rhone Resch, vice president for energy marketing at the Natural Gas Supply Association, a producers' trade group in Washington.

But last year, Canadian production fell for the first time since 1986. Thomas R. Driscoll, an analyst at Lehman Brothers in New York, said in a recent report that he expected a further decline of 2 percent to 4 percent for this year.

The problem is that gas reserves in western Canada are being depleted more quickly than readily recoverable new reserves can be found. Martin King, an analyst at FirstEnergy Capital in Calgary, said, "There's a growing realization that there's no good, cheap gas left."

According to a survey of 95 companies by Nickle's Daily Oil Bulletin of Calgary, additions to gas reserves last year, totaling 3.7 trillion cubic feet, were the lowest since 1996, and down 23 percent from the record set in 2001.

The gas industry thought it had a huge new find three years ago with the discovery of the Ladyfern field in British Columbia. But Ladyfern has been a disappointment.

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The underground pressure in the field has fallen rapidly, making it more difficult to bring the gas to the surface; also, water has seeped into many wells.

According to Mr. King, output from Ladyfern has fallen by about two-thirds from a peak in mid-2002 and it alone accounts for about half of the overall decline in western Canadian production this year.

There have been other setbacks, too. For example, development of a remote but promising offshore field in Nova Scotia, Deep Panuke, has been delayed.

Recent high gas prices could encourage companies to move into regions like the foothills of the Canadian Rockies, where gas pools are deep, the geology is relatively complex and production costs are correspondingly higher.

According to Mr. King, drilling a single well in the foothills can cost 3 million to 10 million Canadian dollars (\$2.2 million to \$7.4 million), compared with just 150,000 Canadian dollars (\$111,000) for a small, shallow well in southern Alberta.

But Peter Hunt, a spokesman for ConocoPhillips Canada in Calgary, said, "Last time there was a marked increase in exploratory drilling due to higher prices, all that we managed to do was to replace what we were already producing."

Today's supply squeeze has heightened interest in two ambitious long-term projects intended to bring gas from Alaska and the Canadian Arctic to the lower 48 American states. Last week, a consortium led by ImperialOil, Exxon Mobil's Canadian unit, completed a partnership agreement with the aboriginal peoples in the Northwest Territories and with TransCanada PipeLines for a 800-mile pipeline linking new gas fields in the Mackenzie River delta to TransCanada's main network.

This pipeline, expected to cost about \$3 billion, would have a capacity of about 1 billion cubic feet a day, equal to almost 2 percent of American consumption. An even bigger project, reaching gas fields in northern Alaska, would carry 4 billion to 5 billion cubic feet a day; the estimated cost is 20 to 26 billion dollars.

Both projects still face a number of hurdles, including regulatory and environmental approvals, and perhaps Congressional action, as well as financing arrangements. According to industry executives and analysts, the Mackenzie Delta pipeline is unlikely to be completed before 2008, and the Alaska project might follow two to five years later.

Mr. Kvisle of TransCanada said that the prevailing high price for gas "gives producers more incentive than would otherwise be the case" to move ahead with such ambitious projects. But the companies know, he added, "that the price that matters is the price 6 or 20 years in the future."

In Natural Gas's Future, Experts See More High Prices and Growing Imports

By MATTHEW L. WALD

Continued high prices for natural gas will drive some industries offshore and increase gas imports by tanker, according to participants at a meeting the Energy Department convened here today to confront gas shortages.

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Energy Secretary Spencer Abraham said prices were so high that some companies using natural gas in manufacturing would find it more profitable to shut down and then sell their gas reserves. He and others predicted higher costs for summer electricity and winter heating.

The country is "running out of gas and balancing the demand by destroying jobs," said William S. Stavropoulos, chairman and chief executive of Dow Chemical, which burns natural gas for heat and uses it as an ingredient in chemical products.

On the other hand, John F. Nunley III, director of the energy office of the State of Wyoming, an oil and gas producer, said it was hard to say now what the supply and demand picture would be next winter. "We must keep in mind that things may work out just fine without action by government," said Mr. Nunley, who is chairman of the National Association of State Energy Officials.

Experts trace the current high prices and low inventories to a small dip in production and increased demand over an unusually cold winter.

Higher gas prices are lifting electricity prices and thus revenue for companies that make electricity from coal or nuclear power. They are also stimulating interest in imports.

Patrick Henry Wood III, chairman of the Federal Energy Regulatory Commission, said that the nation's import capacity is about three billion cubic feet a day, but that companies had filed for permits to increase that to nine billion cubic feet a day by 2007. Fifteen projects under study around the country could increase import capacity to more than 13 billion cubic feet a day by 2009, he said.

"The United States is on its way to becoming part of a global gas market," said Daniel Yergin, an energy expert and adviser to the energy secretary. He painted a picture for natural gas in this decade much like that of oil in the 1970's, when prices rose and stimulated drilling, but domestic supplies were still inadequate and imports had to make up the difference.

Natural gas imports could make up 5 percent of American energy demand by 2020, up from well under 1 percent now, Mr. Yergin said, and would come from a broader range of countries than those that supply oil.

Also, he noted, there is no export cartel for natural gas, as there is for oil.

The technology used to turn natural gas into a liquid has improved, and experts say that the price per million British thermal units needed to justify new investment is in the range of \$3 to \$4.50. Lately the price has hovered around \$6, although few expect it to stay that high.

A million B.T.U.'s is the energy equivalent of about 7.2 gallons of diesel fuel. The most modern gas-fired electric plants can make about 140 kilowatt-hours from that amount of gas, which is enough electricity to power a single-family house for three or four days, depending on the climate.

But older plants can produce only about half as much electricity from that amount of gas. If power companies expect high prices to become permanent, they are likely to modernize such plants, which would stretch gas supplies, experts say.

Several participants in the meeting said prices were likely to stay high by historical standards, because the current price squeeze was different from the last crisis. That was in the mid-1970's, when price controls discouraged exploration. When they were lifted, new drilling swelled inventories.

This time, high prices have spurred drilling: there are 915 drilling rigs at work, up about 50 percent over last year. But increases in supplies, when they come, are expected to be modest, because the gas

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fields on shore in the lower 48 states, in Canada and in the shallow waters of the Gulf of Mexico, are past their prime, experts say.

Some experts said domestic production could be pushed up sharply if the industry were allowed into the eastern Gulf of Mexico and the Atlantic and Pacific coasts — where drilling has been barred by successive Republican and Democratic administrations — and on public lands.

Some power producers have raised the idea that because natural gas prices are high, the federal government should temporarily relax air pollution rules, allowing more coal and oil to be burned. Coal is burned in specialized plants but some turbines designed for natural gas can burn oil as well.

But E. Linn Draper Jr., chairman and chief executive of American Electric Power, the nation's biggest coal customer, said today that that idea was "premature."

Robert Card, an under secretary of energy, said in an interview that his department would not propose measures that would make air pollution worse, but might endorse them if states raised the issue, as California did during its electricity crisis.

Daniel A. Lashof of the Natural Resources Defense Council told the group that the country should ride out this boom part of the boom-and-bust gas business. "High gas prices inflict harm on people and our economy, but so does pollution," he said.

Outside the meeting, at the Mayflower Hotel, about two dozen protesters from the U.S. Public Interest Research Group carried signs with slogans like "Windmills, not oil wells."

The Energy Department announced today that last week, for the fourth consecutive week, the amount of gas put into storage for winter set a record. The total, though, is still about 19 percent below the five-year average for this time of year.

FERC targeting 60 power sellers

But federal regulators reject the state's request that they order renegotiation of long-term pacts.

By David Whitney June 26

Acting on their March report of "epidemic" manipulation of the California electricity market two years ago, federal power officials Wednesday ordered administrative trials of about 60 power sellers that could be forced to return corporate profits for market gaming.

But the Federal Energy Regulation Commission voted 2-1 to reject California's request that it order renegotiation of long-term power contracts worth about \$12 billion that it entered into during the height of the electricity crisis, on grounds that the state was in essence forced to the table by prices driven up by fraud.

That decision was not a surprise since the commissioners had indicated in March that only William Massey, the panel's lone Democrat, felt the evidence of wrongdoing was so compelling as to overturn contracts the state willingly entered into.

FERC also voted 2-1 against any refunds for the Pacific Northwest arising out of the electricity crisis. That ruling ended California's \$1.5 billion claim for refunds for power purchases from the Bonneville Power Administration, Powerex Corp. and other suppliers, the state said.

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"The commission has completely ignored evidence that manipulation in California greatly impacted the Pacific Northwest," said California Deputy Attorney General Vickie Whitney. "To get nothing is incredulous."

Still pending is a separate California refunds claim, which will probably yield in the neighborhood of \$3 billion. Those refunds did not come up at Wednesday's meeting, and commission chairman Pat Wood said later that it will be months before the calculations will be completed.

The commission also voted unanimously to revoke the authority of Enron Corp. to operate in the deregulated power markets. It was the harshest step the commission is empowered to take.

But the practical consequences of the decision are dubious since the company is in bankruptcy proceedings. Enron has withdrawn from trading but continues to deliver some gas and power to customers under contract.

The commission's refusal to order renegotiation of the long-term contracts affects only about a third of the deals the state signed in early 2001. Eighteen of the 24 contracts already have been renegotiated, significantly lowering the state's costs. The six remaining contracts are worth about \$13 billion.

The commission said it was not in the public interest for the commission to interfere with these contracts. Wood noted published reports in which Davis praised the contracts and David Freeman, who negotiated them, touted them as "fair, negotiated deals."

"I didn't see duress," Wood said.