



# ENERGY RISK MANAGEMENT

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## POWER MARKET REPORT FOR DECEMBER 9, 2004

### NATURAL GAS MARKET NEWS

In its Annual Energy Outlook 2005, The U.S. EIA projects that the average U.S. natural gas wellhead price will rise in the short term to \$5.30/Mcf in 2005 from \$4.98/Mcf in 2003 before it falls to \$3.64/Mcf by 2010. The long-term projection is based on supply expansion due to increased drilling and availability of new import sources. By 2025, EIA projects wellhead prices to drift up to \$4.79/Mcf (in 2003 dollars). Assuming that the economy grows at 3.1%/year, the EIA reports that U.S. energy demand will experience an average growth rate of 1.4%/year, with demand rising to 133.2 quadrillion Btu by 2025 from 98.2 quads in 2003. Gas Consumption is expected to rise to 31 Tcf from 22 Tcf in the period 2003-2025. Increased LNG

#### EIA Weekly Report

	12/03/2004	11/26/2004	Net chg	Last Year
<b>Producing Region</b>	942	966	-24	857
<b>Consuming East</b>	1867	1910	-43	1756
<b>Consuming West</b>	402	423	-21	371
<b>Total US</b>	3211	3299	-88	2984

imports and Alaskan gas will meet the increasing U.S. gas demand. LNG imports are projected to rise 6.4 Tcf in 2025 from .4 Tcf in 2003. Assuming completion of the Alaskan pipeline in 2016, Alaskan output is likely to rise to 2.2 Tcf in 2025 from .4 Tcf in 2003. EIA also reported that domestic gas production will rise to 21.8 Tcf in 2025 from 19.1 Tcf in 2003. This projection is much less than last years 24 Tcf by 2025. Onshore production in the Lower-48 is predicted to increase from 13.9 Tcf in 2003 to a peak of 15.7 Tcf in 2012 before falling to 14.7 Tcf in 2025. Similarly, offshore gas production in the Lower-48 will rise from 4.7 Tcf in 2003 to 5.3 Tcf by 2014 before falling to 4.9 Tcf by 2025. The report also commented that Canadian gas imports will decline from 2003 levels of 3.1 Tcf to about 2.5 Tcf in 2009, then because of rising gas prices and increased coalbed methane production, Canadian imports will likely rise to 3 Tcf by 2015. The EIA reports that after 2015, U.S. net imports are expected to fall to 2.6 Tcf because of reserve depletion and rising demand within

### Generator Problems

**ECAR** – DTE Energy Co returned its 1,130 Mw Fermi #2 nuclear unit to full power. #2 was at 51% yesterday after exiting a Dec. 4 outage earlier this week from a voltage regulator trip.

**Canada** – OPG's Pickering 4 nuclear unit returned to service. The unit had been off line since November 26th

**ERCOT**– TXU's 575 Mw coal fired Unit #1 at the Big Brown Steam Electric Station was expected to be restarted this evening following completion of repairs on a boiler tube leak.

**MAIN** – Exelon boosted its 900 Mw Dresden #3 nuclear unit 7% to 26%. #3 is was offline yesterday at 19% coming off a refueling. The 800 Mw #2 unit remains offline for a turbine vibration investigation.

Nuclear Management Company boosted power to its 574 Mw Kewaunee nuclear unit by 7% to 55% following a refueling and installation of a new reactor vessel head.

**NPCC** – Ontario Power Generation returned its 515 Mw Pickering A #4 nuclear unit to service, it had been shut since Nov. 26. OPG's Pickering plant units #4-6 and #8 are available for service.

**WSCC**– Reliant Energy returned its 320 Mw Etiwanda #3 gas-fired to service. #3 was shut Nov.24 for a mechanical issue. Etiwanda #4 remains off line for scheduled service since Nov. 30.

AES Corp shut its gas-fired 320 Mw Alamitos #4 unit for planned reasons. #4 was available for full service yesterday. Alamitos #3 and #6 are also out of service.

Duke Energy shut its natural gas-fired 750 Mw Moss Landing #7 for a week for planned service. All the other Moss Landing units are available for service; #1 at half power to repair a compressor failure.

Canada. Finally, EIA projected that non-associated unconventional gas production is projected to grow to 8.6 Tcf in 2025 from 6.6 Tcf in 2003.

Canadian natural gas production seems to be rebounding from its recent declines in production, and exports of gas reversed their trend in the first quarter of 2004 and have shown modest growth this year. Lehman analysts published a report predicting Canadian gas production will rise 1.5% for all of 2004 versus a 3.5% decline in 2003. The report also estimated that net exports from Canada to the U.S. are up 3% through Nov. versus a 13% decline in the same period of 2003. High natural gas prices have allowed for more drilling in once uneconomic locations yielding new wells such as Shell's discovery in Alberta. Bill Powers of The Canadian Energy Viewpoint is bearish, with the opinion that the trend of rising production and exports going in reverse by 2005. Powers notes that less wells were completed this summer than last, and that conventional fields in Alberta, British Columbia and offshore Nova Scotia decline and coal bed methane picks up.

Weak El Nino conditions should persist into early 2005 resulting in a warmer than usual winter in the U.S. northern plains and west, and a cooler than normal winter in parts of the south, according to the National Oceanic and Atmospheric Administration latest update today.

Consultants at the Denver-based consultants Bentek Energy LLC estimate that the coming drilling boom will result in natural gas prices, especially in the Rocky Mountain region falling down to near \$3 per Mmbtu by the end of 2005.

**Canadian Gas Association**

**Weekly Storage Report**

	03-Dec-04	26-Nov-04	05-Dec-03
<b>East</b>	244.8	247.3	251.4
<b>West</b>	214.6	220.9	181.0
<b>Total</b>	459.4	468.3	432.4

Reuters surveyed a group of meteorologists today and found that most are looking for temperatures next week to drop in the Midwest and Northeast putting an end to the current period of well above normal temperatures. But the extent and length of this cold snap seemed still up to debate. Accuweather forecasters are looking for the move next week toward colder temperatures the start of a longer-term pattern of colder temps for the east and into the Midwest being established for four to six weeks. Forecasters at Freese-Notis though said "it is too early to say at this point" if next week's colder temperatures are the start of a longer-term pattern or just a brief cold snap. They noted that a lot of the forecasting models have been erring on the cold side so far this year and been wrong to date. Forecasters at Harris-mann said next week's cold snap is likely to last for some 5 days and will be followed by another cold snap at the end of the month with even more severe arctic air. This late month cold snap is going to cover two thirds of the nation and may stretch down into the Gulf States.

The U.S. Minerals Management Service reported this afternoon that some 4.96 Mmcf/d of shut in natural gas production had been returned to service since Monday. As of this afternoon some 594.29 Mmcf/d of USG natural gas production remained shut in.

**PIPELINE RESTRICTIONS**

NGPL is at capacity for gas

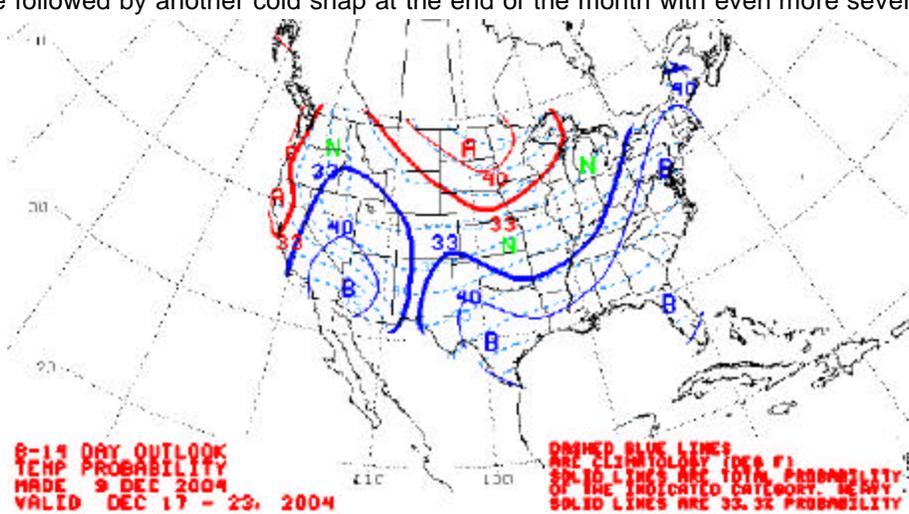
**Generator Problems-Continued**

Arizona Public Service boosted its 1,270 Mw Palo Verde #3 unit 24 % to 43% as it comes back on line from a refueling. #3 was at 19% yesterday.

The California Department of Water Resources decreased the potential power output of its 933 Mw Hyatt-Thermalito hydropower plant. Power was curtailed by over 858 Mw.

**The NRC reported that U.S. nuclear generating capacity was at 87,191 Mw today up .98% from yesterday.**

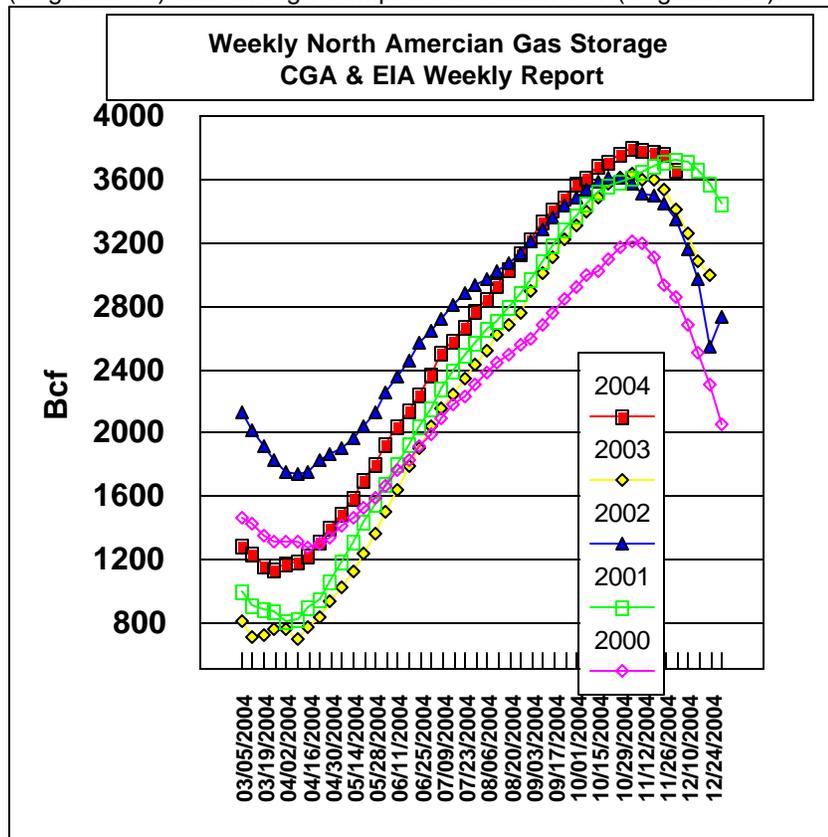
**Cal Iso reported that 11,915 Mw of generation capacity was offline today, up 1849 Mw from yesterday.**



8-14 DAY OUTLOOK  
TEMP PROBABILITY  
MADE 9 DEC 2004  
VALID DEC 17 - 23, 2004

DASHED BLUE LINES  
ARE 33-35°F PROBABILITY  
SOLID BLUE LINES ARE 33-35°F PROBABILITY  
SOLID RED LINES ARE 40°F PROBABILITY

received upstream of Compressor Station 155 in Wise County, Texas in Segment 1 northbound. Deliveries to Florida-Jefferson are at Capacity with increases to ITS/AOR and Secondary transport volumes may not be available. In the Louisiana Line, Segment 25 in the Texok-Gulf Coast Zone eastbound from Station 302 in Montgomery County, Texas is at capacity. Also, Segment 23 eastbound through Station 342 in Cameron Parish, Louisiana and segment 24 eastbound through station 346 in Cameron Parish, Louisiana are at capacity. NGPL is at capacity for transportation going northbound through and downstream of Compressor Stations 109 and 110 (Segment 14) and through Compressor Station 801 (Segment 15).



Texas Eastern Transmission Corp's Monroe Line has been nominated to capacity. Receipts between Mount Belvieu in STX and Fagus in M1 24-inch, including zone ETX have been nominated to capacity.

**PIPELINE MAINTENANCE**

Panhandle Eastern Pipe Line Co. said there is an outage at Montezuma due to maintenance on Engine 1313 and will extend till Dec. 13. Available capacity will be reduced by 100 MMcf per day.

El Paso Natural Gas Co. said maintenance on its North Mainline will occur at Leupp, Window Rock and Williams stations at various times, none of the outages will have affects on the market. Capacity reductions will be 15 MMcf/d Dec.13 through 16, 15 MMcf/d Dec. 20 through 23, and 30 MMcf/d Dec. 27 through 29. El Paso's Havasu Crossover Alamo Lake #1 Turbine will be down for mechanical inspection Dec. 15 and 16 reducing capacity by 45 MMcf/d.

East Tennessee Natural Gas says it is currently experiencing high system line pack due to reduced demand and excessive due shipper imbalances on its system. To maintain the operational integrity of the system, ETNG is issuing a Balancing Alert Operational Flow Order. The OFO will remain in affect till more seasonal weather arrives.

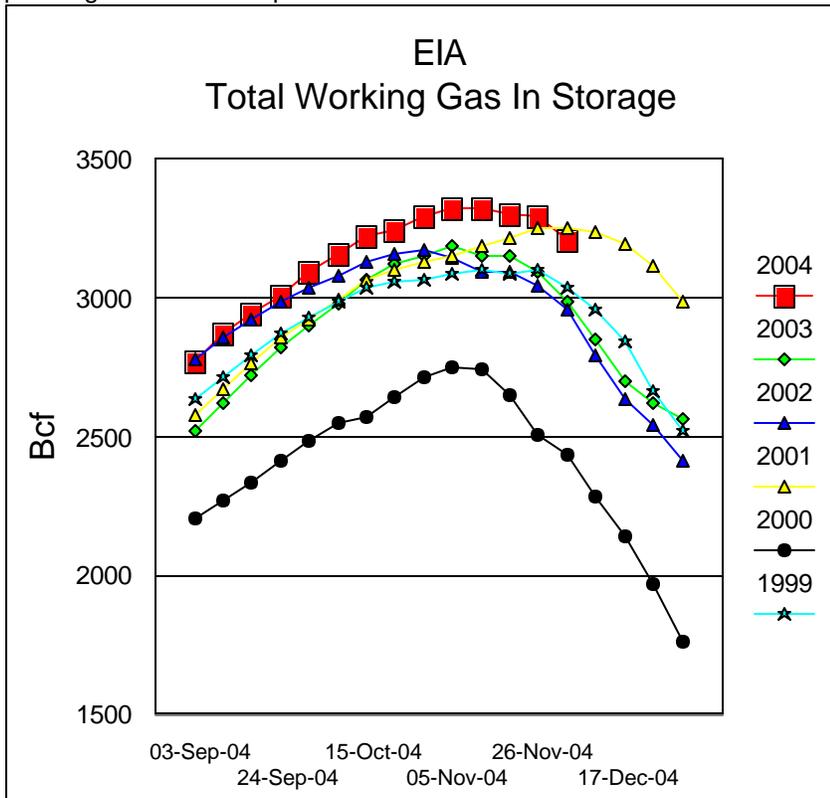
Westcoast Energy experienced an O Ring failure on the K-100 inlet compressor at the Kwoen Gas Plant. Repairs are estimated at 3 days.

Gulf South Pipeline Co said it will perform scheduled maintenance on Index 8 beginning Dec. 13 for 12 hours. Service will be interrupted at the water injection plant at Wright Mountain, Denton and Kelly CP, Moonrock Field CP, and Overton Field CP.

**ELECTRIC MARKET NEWS**

The U.S. Energy Information Administration released its Annual Energy Outlook 2005, projecting an average increase in U.S. power use of 1.8%/year. Total U.S. electricity consumption, purchases from power producers and on-site generation, is expected to rise to 5,467-bil kWh in 2025 from 3,657-bil kWh in 2003. Rapid growth in the end-use sector, made up of computers, office equipment and appliances, will be partially offset by improved efficiency and slower demand growth from the industrial sector. EIA raised its estimation from its 2004 report for future power generated from natural gas by 8%. The new estimate for 2025 is 1,406-bil kWh generated from

natural gas. This figure is more than twice the 2003 level of 630-bil kWh. In the later years of the forecast, less gas-fired capacity will be added due to a projected rise in natural gas prices. EIA reported that gas' share of power generation is expected to rise to 24% in 2025 from 16% in 2003, while the share of power generated from coal is predicted to fall to 50% in 2025 from 51% in 2003. 87,000 Mw of new coal-fired capacity will be added in the U.S. between 2004 and 2005, a decrease from the 112,000 Mw forecast in the 2004 outlook. Assuming that all existing nuclear plants will continue to operate, EIA projects nuclear-generating capacity to rise 102,700 Mw in 2025 from 99,200 Mw in 2003 as upgrades are made to the existing plants. New plants "are not expected to be economical," the report said, and total nuclear generation is projected to grow to 830-bil kWh in 2025 from 764-bil kWh in 2003. The EIA report commented that renewable technologies for generation is projected to grow slowly because of the relatively low cost of fossil fuel-fired plants and because competitive power markets "favor less capital-intensive technologies." The projected figures for renewable technologies put power generation at 489-bil kWh in 2025 from 359-bil kWh in 2003, a growth rate of 1.4%/year. Carbon Dioxide emissions from energy will rise to 8062-mil metric tons in 2025 from 5,789-mil metric tons in 2003, reported EIA, but the CO2 intensity in the U.S. economy will likely fall to 397 metric tons per million dollars of GDP in 2025 from 558-mil metric tons per million in 2003, an average decline of 1.5%/year.



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The DC Intertie, which connects the Pacific Northwest and southern California, returned to service this week with a partial load of 1,500 Mw and should be back to full capacity, 3,100 Mw, in a couple weeks. The line was taken down for a modernization project in October and returned ahead of schedule and under budget.

MidAmerican Energy Company received approval for its proposed 122-mile long electrical transmission line. The 345 Kv line will deliver energy from the new Council Bluffs Energy Center Unit 4 generating station in Iowa.

The Public Utilities Commission of Ohio rejected the results of a competitive auction held to supply electricity to First Energy Corp.'s distribution companies in Ohio. The commission said instead that it would adopt a rate stabilization plan where FirstEnergy would continue to provide the power to its customers.

The Texas Public Utility Commission has initiated an investigation into late November price spikes on the wholesale electricity "balancing market" for ERCOT. The investigative division is looking at the activities of TXU Energy on November 29<sup>th</sup> when there was 17 15-minute intervals during which the price of balancing energy rose above \$400 Mwh or ten times the average price.

Northwest stakeholders are preparing to vote later today on whether RTO West should evolve into Grid West, a regional transmission operator that would control the BPA's transmission system. But a legal challenges to a possible approval of the RTO may delay or halt the formation of the new RTO even if stakeholders prepare to move forward. Municipal utilities led by Snohomish County Public Utility District, are fighting the RTO current proposed bylaws since they believe it will allow the RTO to operate independently of BPA. The RO will negotiate new transmission agreements with utilities and the minis fear they will have little input into shaping these new

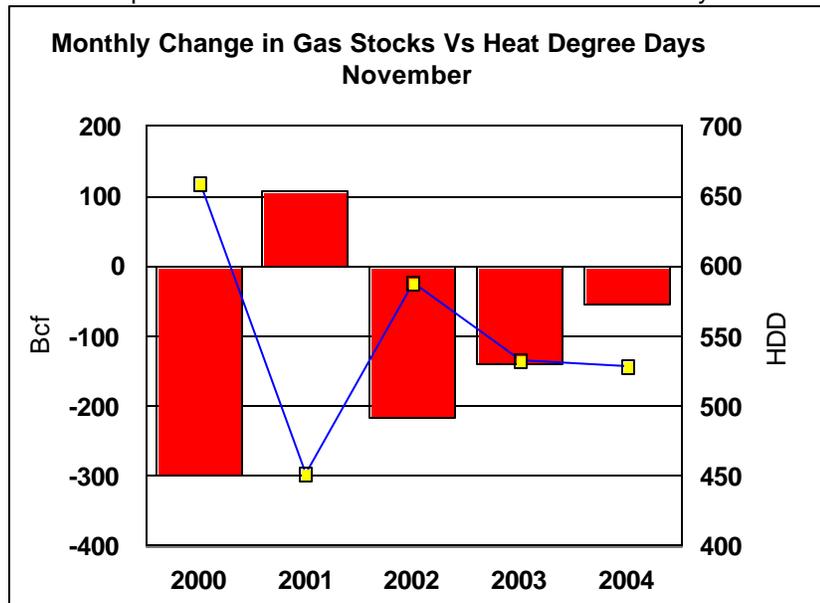
contracts. They note that the BPA is required to conduct an open meeting process, while the RTO can operate behind closed doors.

The Iso New England said today that the region's power supply should be adequate to meet projected electricity demand this winter. The organization though noted it had taken additional proactive steps to enhance system operations and ensure reliability should an extreme weather event occur. The ISO projected a peak winter demand at 22,370 Mw, with a 10% chance severe weather causes demand to set a new record of 23,255 Mw.

**MARKET COMMENTARY**

The natural gas market this morning received a shock, as the EIA storage report showed a larger than expected draw of 88 bcf. This surprise immediately lifted futures prices by 30 cents. But prices then spent the next 45 minutes erasing much of these gains as traders looked at the storage report with an eye of skepticism, and rationalized that this report could have shown such a large draw down due to storage customers forced to draw down some of their inventories during the last week of month to avoid penalties, given the preceding weeks had seen such poor heating demand that many customers had failed to draw down their monthly minimums. Prices found support basically at their prior resistance point early in the day at \$6.80 and settled into a quiet sideways pattern for much of the afternoon trading between \$6.80-\$6.90. Final volume on the day was moderate at best, especially for a storage report day, with just 71,000 futures traded.

This market will remain sensitive to changes in the weather forecasts. There still appears to be a poor consensus on the temperature outlook for middle of next week and beyond. But if forecasters begin to fall in line behind one



weather forecast then this market will move accordingly. In addition the flat price direction of oil will also be felt in the natural gas tomorrow, especially as oil traders await the production policy decision by OPEC ministers meeting in Cairo tomorrow.

We still believe we will get some lift from this promised colder weather pattern change and will continue to hold our Jan-March spread position. We see resistance tomorrow at \$6.95 followed by \$7.10, and \$7.36. Additional resistance we see at \$7.62, \$7.77-\$7.785, \$7.875 and \$8.065. Support we see at \$6.80, \$6.70, \$6.54 and \$6.505. More distant support we see at \$6.31, \$6.02 and \$5.96.

