

**EXHIBIT NO. ___(DEM-13C)
DOCKET NO. UE-07___
PCA 5 COMPLIANCE
WITNESS: DAVID E. MILLS**

**BEFORE THE
WASHINGTON UTILITIES AND TRANSPORTATION COMMISSION**

**In the Matter of the Petition of
PUGET SOUND ENERGY, INC.**

**For Approval of its March 2007 Power Cost
Adjustment Mechanism Report**

Docket No. UE-_____

**TWELFTH EXHIBIT (CONFIDENTIAL) TO
PREFILED DIRECT TESTIMONY OF DAVID E. MILLS
ON BEHALF OF PUGET SOUND ENERGY, INC.**

**REDACTED
VERSION**

March 30, 2007



Fundamental Summary

Week ending 4/29/2005

Natural Gas

XX
XX
XX
XX
XX
XX
XX

Power

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XX
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XX

Storage

- ◆ Currently 29% above the 5-year average and 24% above last year's levels. (EIA)
- ◆ Mild weather across the nation has increased the storage surplus and storage levels remain comfortable. This should provide some price relief for the near-term, at least until summer when gas fired generation is expected to increase.

Weather

- ◆ The national weather service is forecasting slightly below normal temperature for most of the nation the next 6-10 days, with the exception of the Northwest, which is forecasted to have slightly above normal temperatures.

Oil

- ◆ In the past few weeks crude oil prices have declined from their previous highs and gas has closely followed. Throughout the winter fear over distillate levels added strength to crude oil. Now this fear has moved to gasoline inventories and refinery outages. This fear of gasoline shortages and/or refinery glitches should add support to crude oil prices for the near-term.
- ◆ Crude oil inventories are above the two-year high, while distillate inventories have hovered around the five-year low for the past few months. This week the EIA reported a much larger than expected build in crude oil inventories, providing a significant bearish signal to the market. As always, geopolitical threats and supply disruptions continue to lend upside support.

Economics

- ◆ This week the Commerce Department reported Q1 2005 economic growth slowed to 3.1%, both lower than forecasted and a two-year low. This slowing of the economy may be evidence of demand destruction due to higher energy prices and other rising consumer costs.

Hydro

- ◆ Forecasts are indicating a lower than normal runoff season due to meager snowpack and precip. NWRFC Jan-Jul runoff forecast is at 83% of normal for GCL, and 69% for TDA.
- ◆ Snowpack is 60% of normal for Columbia above Methow (NOAA – NCDC).
- ◆ Columbia above Coulee precipitation for April is 96% of normal and is 83% of normal for the water year. Columbia above the Dalles precipitation for April is 109% of normal and 78% of normal for the water year (NWRFC)
- ◆ Runoff for inflow at Grand Coulee is 70% for the month of April. While runoff for inflow at the Dalles is 63% of normal for the month of April (NWRFC).

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Fundamental Summary

Week ending 5/27/2005

Natural Gas

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Power

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Storage

- ◆ Currently 22% above the 5-year average and 16% above last year's levels. (EIA)
- ◆ Decreased demand for gas fired generation, mild weather, and a weak cash market for gas relative to the winter strip all have increased the rate of injections into storage. These comfortable storage levels may to help soften any short-term price spiked due to increased gas-fired generation or the hurricane season.

Weather

- ◆ The national weather service is forecasting normal temperatures for most of the nation the next 6-10 days, with the exception of Northwest, which is forecasted to have above normal temperatures.

Oil

- ◆ Crude oil prices continue to show signs of weakness, with gas following closely.
- ◆ Crude oil inventories have been increasing sharply the past few weeks and are currently well above their two-year range. Refinery capacity has also increased sharply, while gasoline inventories are 3% above their five-year average. However, fear over the summer driving season is adding price support for crude.

Hydro

- ◆ Forecasts are indicating a lower than normal runoff season due to meager snowpack and precip. The NWRFC Jan-Jul runoff forecast is currently at 86% of normal, up 3% since their last forecast.
- ◆ Water supply for the Dalles and the Snake River has increased substantially during the month of May.
- ◆ Columbia above Coulee precipitation for May is 124% of normal and is 86% of normal for the water year. Columbia above the Dalles precipitation for May is 185% of normal and 87% of normal for the water year (NWRFC)
- ◆ Runoff for inflow at Grand Coulee is 76% for the month of May. While runoff for inflow at the Dalles is 72% of normal for the mor of May (NWRFC).

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Fundamental Summary

HEDGING OUTLOOK



January 2006

WEATHER

- ◆ The market is being driven almost exclusively by short-term weather forecasts, primarily on the East Coast.
- ◆ Weather from Chicago to New York and Boston has been well above normal, on the order of 10 degrees or more, and this is forecast to continue for at least the next 6 days.
- ◆ Weather for the Pacific Northwest is expected to be slightly above normal, and rain is expected on the west side of the cascades for the next week.

Nat'l Temperature DFN Dec '05: -0.3
 Local Temperature DFN Dec '05: -2.9
 Forecast Nat'l HDD Winter 05-06: 0%

CRUDE

- ◆ Crude oil prices have continued to strengthen. Prompt month Nymex traded close to \$64/bbl today and the forward curve is in a contango pattern.
- ◆ OPEC has indicated a desire to cut production at its next meeting to support prices, Iraq export volumes are at their lowest since the start of the war (~1.1 mm bbl/day), and solid global economic growth and demand. On an MMBtu equivalency, natural gas prices are now significantly below crude oil and its equivalency price, and this could lend support to natural gas prices going forward.

WTI Prompt: \$61.06

NATURAL GAS SUPPLY

- ◆ Natural gas supplies appear to be adequate to avoid any shortages this winter, and that fear premium is what has primarily lowered gas prices so massively.
- ◆ With the warm weather, and minimal storage withdraws expected during the next two weeks, it looks like we will exit the winter with at the very least 1.1 Bcf of gas in storage (based on largest historic draws). More likely, we will exit the winter with 1.2 Bcf or more based on average withdrawal patterns over the last 5 years.
- ◆ With the cold European winter and disputed gas supplies between Russia and Ukraine, EU natural gas prices have been soaring, while US prices have been falling. Imported LNG supplies are at a trickle of about 1 Bcf/day, and well below average or capacity.

US Storage: 2,641

US Gas Rig Counts: +228 yoy
 Canadian Rig Counts: +18 yoy

HYDRO

- ◆ Near term historic as well as projected precipitation and natural stream flows through July are expected to be 98% of normal versus the 30-year average according to the Northwest River Forecast Center.
- ◆ Runoff Forecasts were volatile over the last month, varying +/- 5% with precipitation and temperature fluctuations.

NWRFC Current GCL Jan-Jul: 106%

GCL Avg Runoff Forecast: 71%

REGIONAL SUPPLY & DEMAND

- ◆ West natural gas supplies are abundant. We may even see a West storage injection in the next EIA report on Thursday. Jackson Prairie has gone from about XX% full before Christmas to XX% full today! West gas storage facilities are currently at record full levels for this time of year.
- ◆ Demand for both gas and power is below average and below forecast, as temperatures at least temporarily are warmer than normal.
- ◆ Since precipitation is also at near normal levels, heat rates are at near term historic or lower levels, and there does not appear to be much need for gas fired power generation at the moment.

Forecasted GDP growth 2006: 3.4%

Forecasted GDP growth 2007: 2.7%

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HEDGING OUTLOOK

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KEY FIGURES Apr '06: 

WEATHER

- ◆ The official hurricane season begins in less than two weeks, and another round of hurricane forecasts comes out next week, which could very well hype-up the market. Furthermore, the summer and its air condition driven load is just around the corner, so significant incremental demand may be on the horizon.
- ◆ April was one of the warmest ever on record in the US. (Actually, it was the 7th warmest). We saw record heat in the Southwest, and rolling brown outs in Texas, because of it. This could be the harbinger of a very warm summer.

Nat'l Temperature DFN Apr '06: +15.3
Local Temperature DFN Apr '06: -0.3
Forecast Nat'l CDD Summer '06: 90%

CRUDE

- ◆ Crude oil has fallen dramatically during the last week as well, and contributed to natural gas falling below \$6.50/Dth. Prompt month WTI is down ~ \$6/bbl in the last week, on fears that high prices are dampening demand. Furthermore, US crude oil inventories are 5% higher than last year, and crude oil imports are on the rise.
- ◆ However, even though the market looks a bit weak at the moment, compounded by rising inflation and rising interest rates, the fact remains that China & India are growing at nearly 10% annually, and little global spare capacity exists.

WTI Prompt: \$63.90

NATURAL GAS SUPPLY

- ◆ As discussed, natural gas supplies are ample for the time being due to the large storage overhang. However, in the longer term, with the return of normal weather, we still suffer from a lack of new supplies.
- ◆ 1.25 Bcf of natural gas is still off-line from last year's hurricane season, and recovery has been so slow that MMS has said that they will stop reporting on the progress.
- ◆ LNG cargoes so far this year are averaging well below 2004 & 2005 average daily imports. Massive coal fired power plants like Mohave (1500 MW) are being shut down due to emissions limits, and the short fall according to the State of California must be made up by natural gas fired power plants and renewables.

US Storage: 1,851
US Gas Rig Counts: +240 yoy
Canadian Rig Counts: +323 yoy

HYDRO

- ◆ The band of uncertainty of seasonal runoff volumes has narrowed dramatically in the past month, and the markets are virtually ensured near normal runoff volumes and refill at this point. Current runoff forecasts for Coulee have fallen slightly to around 98%.
- ◆ The system is largely in 'refill' mode, so there is little room for deviation. Later runoff might enable the system to hold some water over until the more valuable third quarter, but recent warm temperatures suggest that there will be little opportunity for optimization.

NWRFC Current GCL Jan-Jul: 106%
Precipitation Above Coulee: 141%
Regional Snowpack: 100-10%

REGIONAL SUPPLY & DEMAND

- ◆ As with the US as a whole, the Pacific NW market currently has ample supplies of natural gas and power, but summer heat, run-off ending in July, decent mid-8 average flat heat rates from July - Dec 06, and potential hurricane production impacts all have the potential to cut into the surplus and again add a bullish tone to this market.
- ◆ In the longer term, the Cal ISO's chief economist stated that plant retirements will outpace in-state generation additions starting in 2006. California's load has grown on average 1000 MW annually during the last four years and the state has been able to keep pace with new plant additions. However, the state now is losing ground on meeting demand.

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