EQC Presentation: Natural Gas in Montana and Why it is an Important Issue

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March 17, 2005

Senate Energy & Telecomm.Comm.
Exhibit No. 3
Date 3.17.05
Bill No. IN 80

Montana receives the majority of its natural gas from Alberta. Natural gas prices in Montana are significantly affected by Alberta's Natural Gas Price Index-AECO C.

AECO C prices follow the main U.S. price indexes such as the Henry Hub. Montana is essentially a part of a national gas market. What happens to gas in one part of the nation affects what happens in Montana

Source of picture: AECOC Website

Natural Gas Facts

Most Montana produced gas comes from the North-Central portion of the state (86.1 Bcf in 2003). Most of this is exported. Montana imports most of the gas it consumes.

MT consumption: 60-70 Bcf per year.

About two-thirds of that consumption is on NWE's system

MDU is the second largest gas provider serving the eastern third of the state

As Montana becomes more and more connected to the national market, Montanans will likely see higher and more volatile gas prices than historical norms. The reason for this is that North American prices are higher and more volatile than historical norms.

Major Current Issues in MT Nat Gas

Increased price in natural gas from 2002 to the present time and the effects on Montana residents, schools, and businesses (e.g. refineries switching fuels, K-12 schools short of energy funding, LIHEAP requests are higher).

Gas fired electricity generation that was planned to be built in Montana has not been built with the exception of Basin near Butte. This lack of building is related to high gas prices and corporate issues.

National trends in natural gas-short term and long term

History of Gas Prices up to Now

Gas prices in Montana were relatively low comparted to the rest of the U.S. until the 1980's. Delivered prices to residents were in the $5-6/Dkt range in the 80's and 90's which was still low compared to the rest of the nation. In 2000, gas prices in the U.S. went up to $8/Dkt. They went back down in 2001, and began climbing back up in 2002. Today, delivered gas prices in Montana are in the $9-10/Dkt range and rising.

Price increases in Montana/U.S. due mostly to increases in cost of the gas itself

Delivered Price Gas = Wellhead Price (price of gas itself) + Transmission fees + Delivery fees + Other fees (storage)

It is the cost of the gas itself that has led to increased prices

Wellhead price of gas ($/Mcf):

	1990s	2000	2001	2002	2003	2004
U.S.	1.71-**2.19**	3.68	4.00	2.95	4.88	5.49
MT	1.36-1.79 **(1.68)**	2.84	3.12	2.39	3.73	(4.50)

Delivered Price of Gas ($/Mcf):

	1999	2000	2001	2002	2003	2004
U.S.	5.80-6.94 **(6.69)**	7.76	9.63	7.89	9.52	10.74
MT	4.52-5.25 (5.16)	6.03	7.26	5.30	7.08	9.27

(Source: U.S. Energy Information Administration (EIA))

What to Expect in Coming Years

The average U.S. wellhead price of gas was $5.49/Mcf in 2004 due to tight natural gas supply and demand conditions. Henry Hub wellhead gas prices are expected to remain relatively high, averaging about $5.80/Mcf this year and $6.60 in 2006. This translates to over $10/Mcf in delivered gas price to the average U.S. household.

By 2025, the EIA predicts natural gas wellhead price to be $4.79/Mcf or $9.07/Mcf delivered (final) cost (using 2005 dollars—not accounting for inflation). Thus, the price should come back down a bit.

(Source: U.S. EIA)

Why are Gas Prices so High?

Increasing U.S./North American demand over time, especially for electrical generation and industrial use—1-2% demand growth per year-about 50% total by 2025

Tight supply: Lower discoveries per well and higher costs for drilling in the lower-48 than historical norms

Falling net imports to the U.S.. Lower expected production levels for Alberta/Canadian produced gas.

Some bigger supplies such as Alaskan reserves and LNG are not fully available yet.

Recent high oil prices are driving up demand for natural gas.

(Source: U.S. EIA)

Why does the U.S. EIA forecast that gas prices will come back down?

- Market correction
- With higher gas prices, amount demanded of gas will not grow as quickly as previously thought
- U.S. will obtain new sources of natural gas. Lower-48 states unconventional supplies (CBM, shales, deep gas), LNG and Alaskan supply are expected to alleviate tight market conditions in a few years—especially with higher gas prices.

Conclusion #1-Montana is part of the North American Natural Gas Market

- Montana gas consumers and gas prices are affected by nationwide events
- This is a result of increasing U.S. demand for Montana's largest gas source: Alberta
- The increase in demand for Alberta gas is a result of increased transmission capacity from Alberta to the Eastern/Midwestern U.S. and increased gas-fired electric generation in the U.S. West.

Conclusion #2-Increased Gas Price Volatility

- Montana/U.S. may see increasing gas price volatility due to a rising and fluctuating demand for gas and stagnating supply growth.
- Extreme events will likely affect both gas and electricity markets simultaneously
- This may lead to increased investment by utilities in alternative energy generation, and increased reliance on long-term gas contracts.

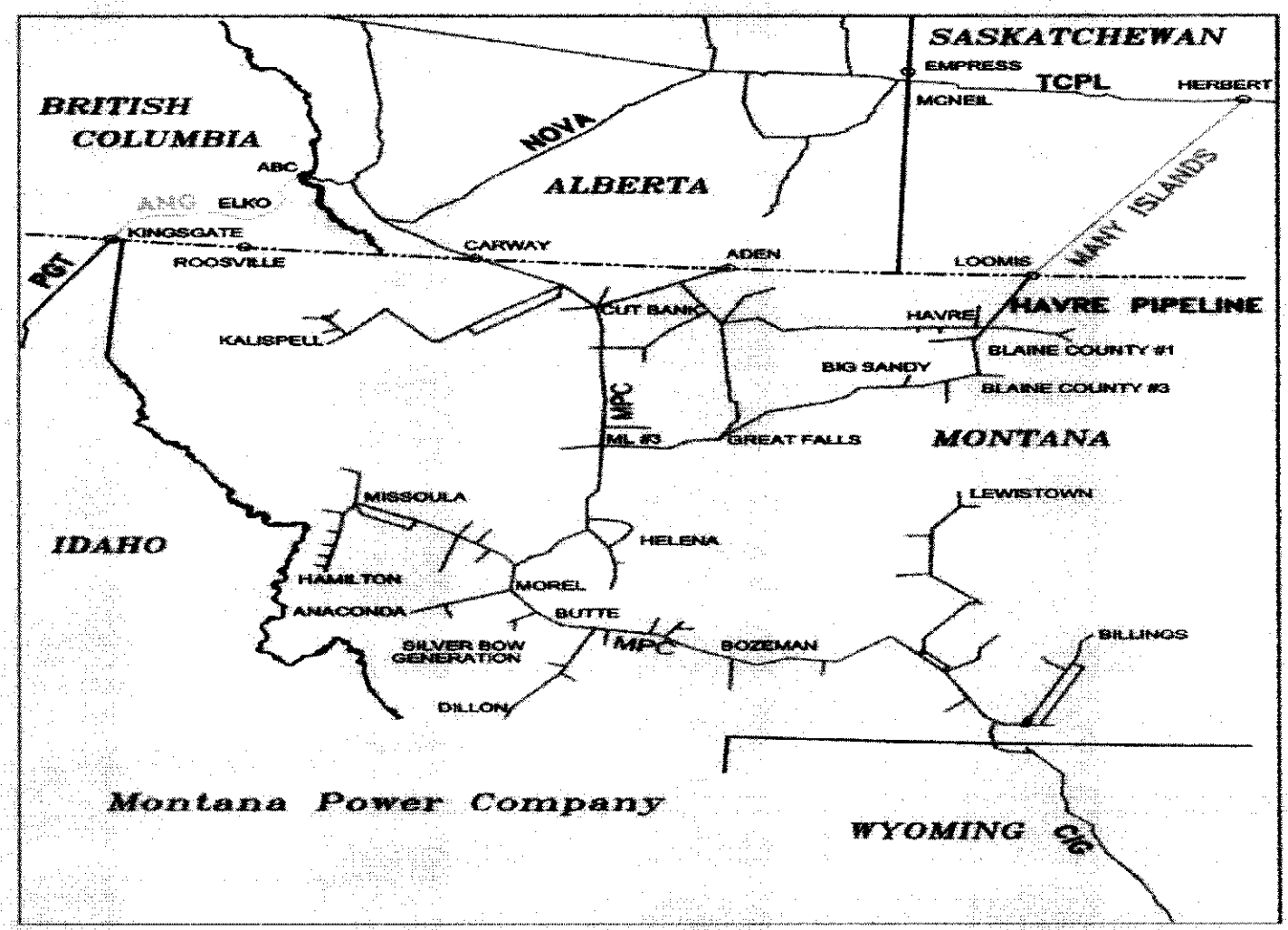
Conclusion #3-Future Prices

- To the extent that the U.S./US West depend upon nat gas for electricity, nat gas prices could be a key determinant of future electricity prices
- Natural Gas Prices are expected to decrease a bit through 2025 in the U.S. and therefore in MT
- Montana's natural gas prices should be close to nationwide prices; perhaps a bit lower on average—possibly up to $1/Mcf lower.

Conclusion #4-Demand & Supply in MT

- Barring any new large natural gas users, demand for gas in MT is expected to grow at about 1% annually.
- Coalbed methane could increase in-state gas production; has not really begun yet in the U.S.

NWE's Natural Gas Transmission System



Source: Northwestern Energy