



Natural Gas Price Regulation in Michigan

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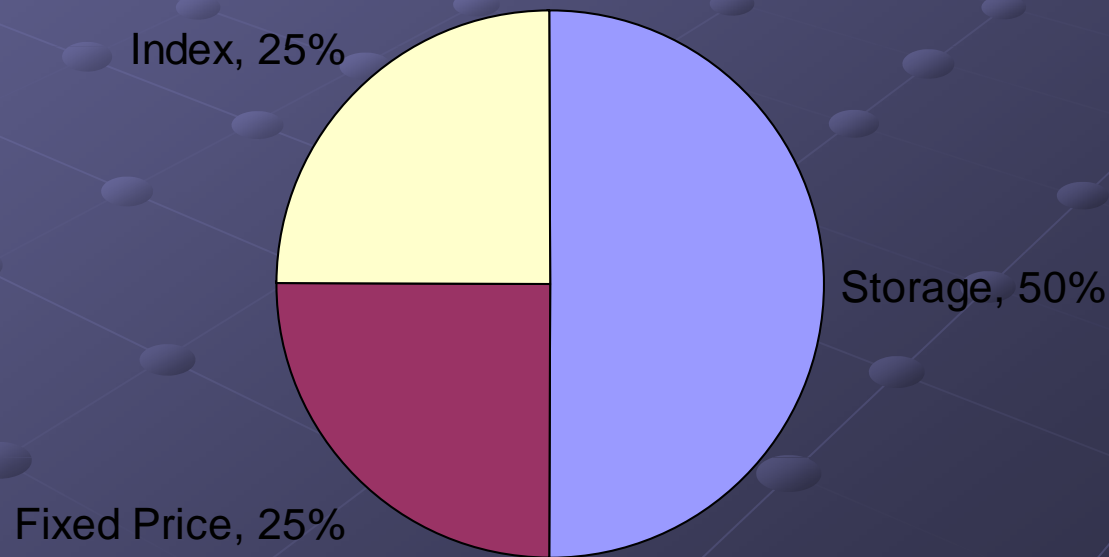
Presentation Outline

- MPSC's Primary Goal
- History of Act 304
- GCR Plan Case
- GCR Reconciliation Case
- MPSC's Regulatory Role
- Past Market Conditions
- Current Market Conditions/Rising Prices
- Hedge Funds and Speculators Role in the Market
- Coping Mechanisms
- Michigan's Storage
- Supply and Pipeline Diversity
- MPSC's Fixed Price Guidelines
- Purchasing Techniques
- Purchasing Strategies Being Developed
- Conclusion

The Primary MPSC Goal for Michigan's Utilities

- To mitigate volatility and reduce gas costs as much as possible through reasonable and prudent purchasing practices as required by statute.

Winter Requirement Pricing Diversity



History of Act 304

- Prior to Act 304, increases in natural gas prices were being automatically passed along to customers through PGA's (purchased gas adjustments).
- In 1982 PGA's were eliminated and Act 304 was signed into law.
- Act 304 allowed (but not required) utilities to file with the Commission for authority to adopt a GCR clause as part of their gas tariffs. If a utility did not request a GCR clause then it would have to recover all its costs through base rates.
- The GCR factor, set annually, recovers only the wholesale commodity and shipping costs of natural gas.
- All other costs such as line maintenance, system upgrades, and employees salaries are recovered through the customer charge and the distribution rate which are set in a general rate case.
- General Rate Cases can be filed at the companies discretion, or if ordered by the Commission. They are typically filed when operating costs have risen significantly above what was filed in the last rate case and the company is no longer collecting revenues that cover its current and future costs to provide gas service and earn a reasonable return on equity.

History Continued

- Act 304 provides for review and possible disallowance of a gas utility's gas costs, while at the same time providing prompt recovery of all prudent costs.
- Implementation of Act 304 requires the filing of a plan case three months prior to the beginning of the plan year.
- In Michigan, plan cases are filed on December 31st. A plan year begins in April with the summer injection season, and runs through March 31st, the end of the winter season.

GCR Plan Case

- The GCR plan case shall contain:

- Expected sources, and volumes, and projected pricing of its gas supply
- Changes in the cost of gas anticipated over plan period
- A specific GCR factor for each of the 12 months
- Description of all major contracts which includes the price of the gas or pipeline capacity, duration of contract, & other terms
- The utilities evaluation of reasonableness & prudence of its decisions to obtain gas
- All legal and regulatory action taken by the utility to minimize the cost of gas
- 5-year forecast of its gas requirements, its customers, anticipated sources of supply, and projection of gas costs

GCR Reconciliation Case

- The reconciliation case shall be filed three months after the end of the plan year (June 30th) and contain the following:

- Comparison of planned purchases vs. actual purchases.
- Comparison of planned storage operations vs. actual storage operations.
- If there are deviations from the plan, an explanation of why they occurred.
- Did the utility follow the peak day plan on the coldest experienced day?
- What was the pricing for all the various gas supplies purchased, and were they reasonable prices at the time of the purchase?
- Did the company act in accordance with any agreements made in a settlement agreement for the plan case?

After Review of the Reconciliation MPSC Staff Makes a Recommendation:

- Staff can recommend recovery of the entire cost of gas, this may result in a roll over of an under collection, a refund of an over collection or...
- Staff can recommend a disallowance of recovery for amounts due to imprudent or unreasonable actions that failed to minimize the cost of gas.
- If an over-recovery has occurred the utility is required to return the over recovered amount to its customers including interest set at the utilities rate of return on equity (ROE).
- If and under-recovery has occurred the utility is allowed to recover the amount still owed to the utility plus interest set at the short term borrowing rate.
- This reconciling of actual cost happens by a “roll-in” method which simply rolls forward the amount into the next plan year’s gas costs.

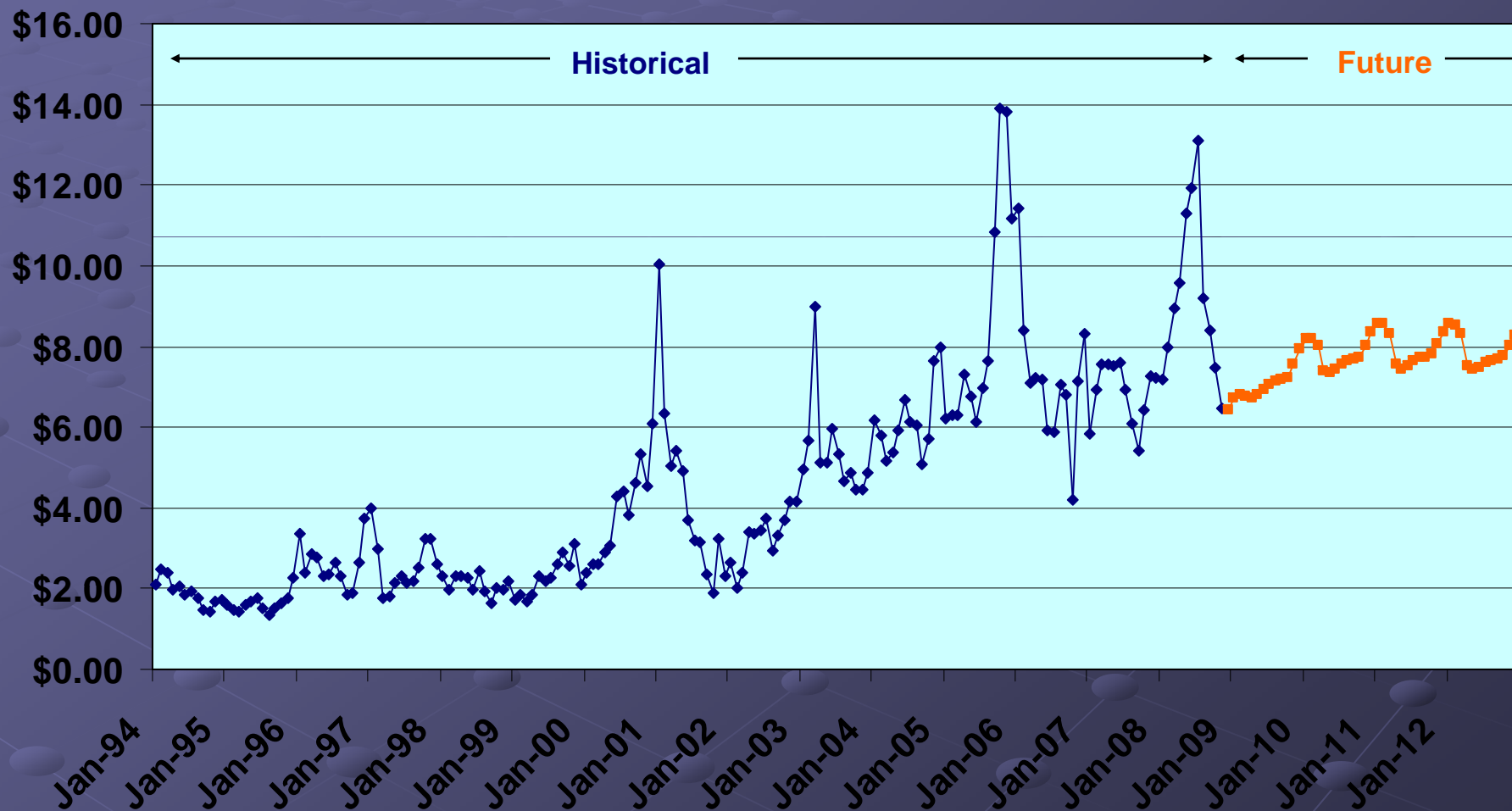
Monitoring the GCR factor

- The GCR is an annualized rate that takes the projected costs and divides them by the projected annual sales.
- Every month the utility may adjust its factor to correct for experienced conditions in an attempt to exactly recover its actual gas costs.
- The utility may always bill below the base rate, or bill up to the maximum authorized factor.
- The maximum authorized factor is calculated quarterly by adding a contingent adjustment based on the change in the market price of gas to the filed base GCR factor.
- The change in the market price of gas is capped at \$3.00
- The resulting adjustment is not one-to-one because Michigan utilities are required to have a diverse supply portfolio.
- A portion of the supply is hedged, physically through storage and through fixed price contracts.
- The hedged gas is not subject to market volatility and this portion of the supply does not require an adjustment.

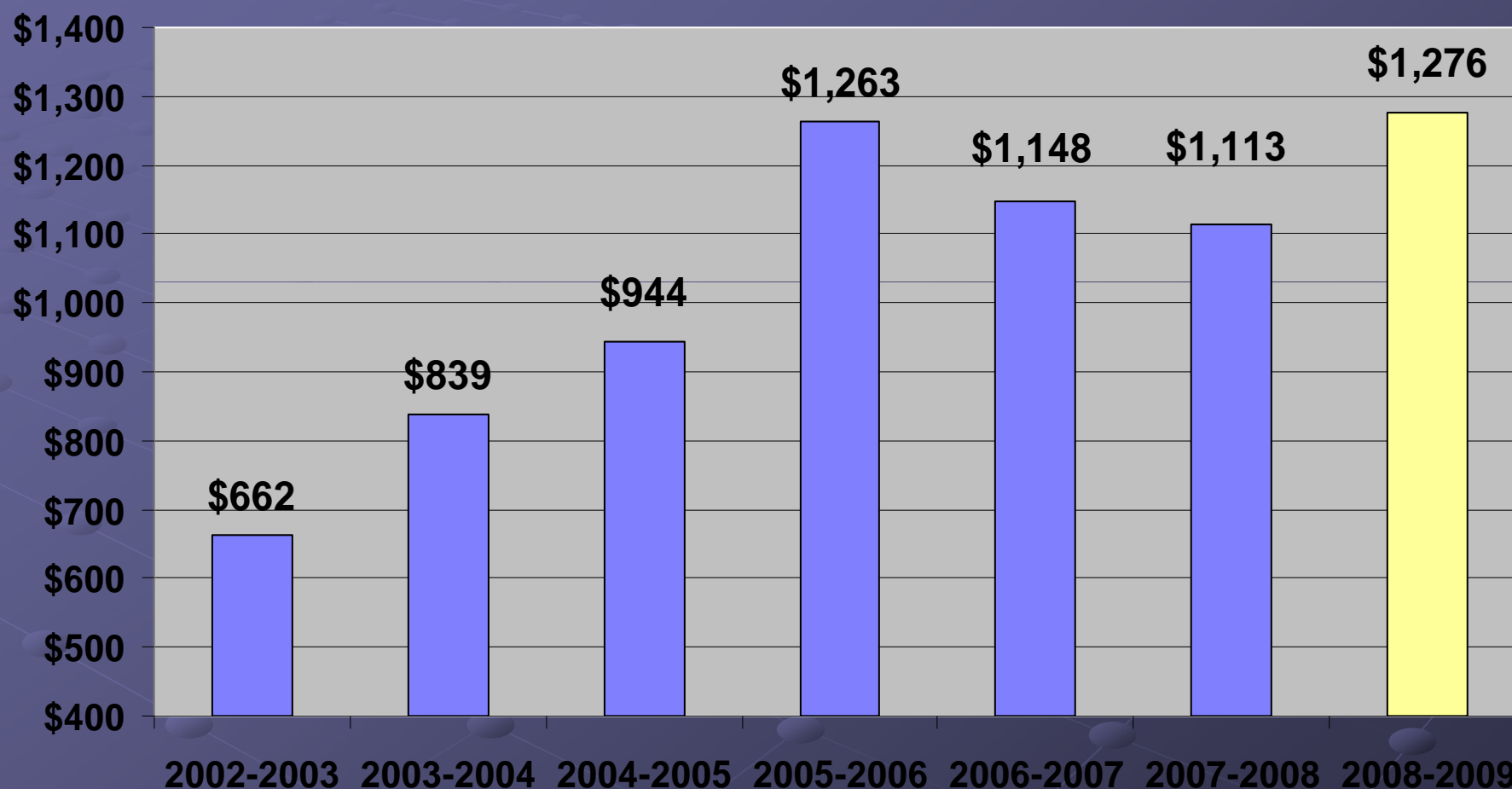
Monitoring the GCR Factor Cont.

- It is in the utilities best interest to exactly recover the cost of gas due to Act 304's interest requirements.
- If the utility over-recovers it must pay the customer back with interest set at the current return on equity.
- Consumers' current ROE is set at 10.75%, approved in August 2007 in Case No. U-15190. The Company has recently filed a request in Case No. U-15506 to increase general rates to reflect an 11.00% ROE.
- MichCon's current ROE is 11.00% which was approved in April 2007 under Case No. U-13989 .
- The current short term borrowing rate used for calculating interest charged to the customers if the utility under-recovers is approximately 5.31% for 2007.

NYMEX Natural Gas Closing & Futures Prices October 31, 2008 Settlement



**Michigan
Residential Natural Gas Customer
Typical Annual Bill (08/09 Projected)**



- Based on an annual usage of 105 Mcf.

- Annual bill includes commodity costs, monthly customer charges, and distribution charges.

Rising Gas Prices

- The first chart depicts the price increase from 2002 to the present. Prices began at \$3.00 and rose at a steady rate to approximately \$8.00/MMBtu.
- It also shows the erratic price spikes, some reaching \$14.00/MMBtu, which are mainly the result a tightening of supply. This supply tightening can be due several factors, such as hurricanes in the Gulf, extremely cold weather in the north, or increased electric generation using gas fired generators
- This sharp increase in price along with volatility has also been blamed on speculation.
- Some of the more dramatic increases are being investigated for possible market manipulation.

Hedge Funds Role in the Market

- Hedge funds play the role of a speculator.
- They seek to hedge themselves against broad market moves while profiting from short term market movements.
- Hedge funds provide liquidity to the market, but in an effort to make additional money, they will leverage themselves, accepting positions that will be difficult to unwind in an emergency.
- Amaranth Advisors lost \$6.5 billion in 2006 (70% of its capital) betting on natural gas price movements.
- Fraud can be a problem with hedge funds. Speculators will sometimes falsify earnings in order to attract more investors to pay mounting debts.
- Speculators have also been known to withhold large amounts of gas supply contracts specifically to cause the price to increase so they can sell these contracts at a profit.

Coping Mechanisms for High Prices

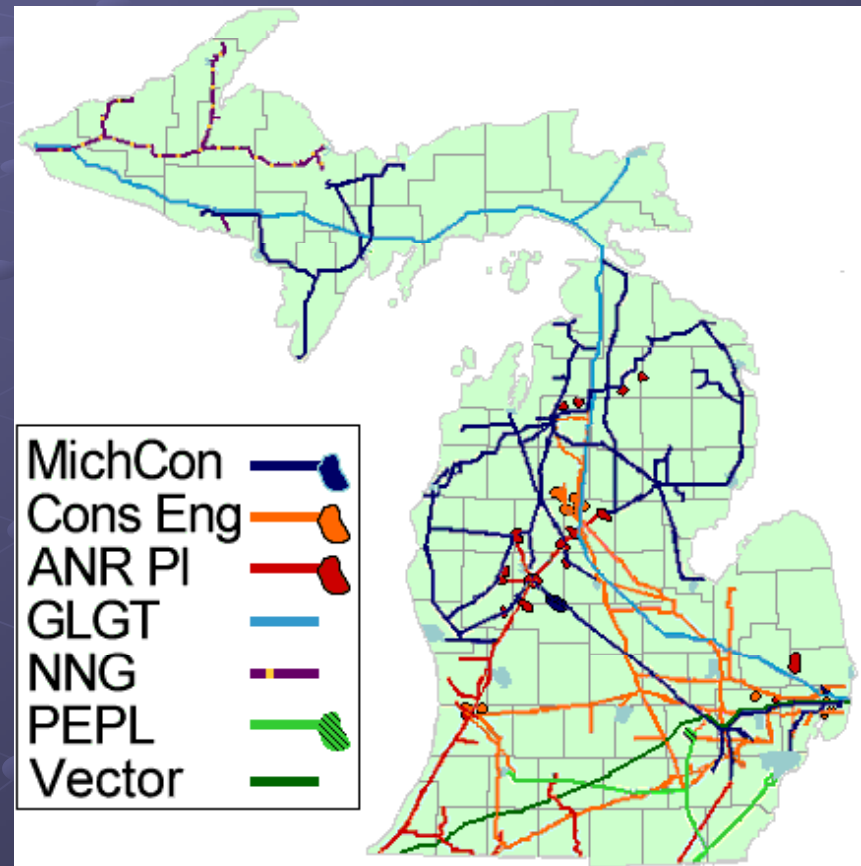
- Physical Hedging, i.e. storage
- Fixed price contracts
- Financial Instruments: futures, options, collars, swaps
- Diversified supply portfolio
- Contingent rate adjustments based on market movement
- Encouraging customers to conserve and purchase energy efficient appliances

Michigan's Storage

- Underground natural storage is one form of physical hedging widely used in Michigan to stabilize prices.
- Michigan has 623 Bcf of working gas capacity. The state may possibly become an important market center in the future due to its storage capabilities and access to multiple interstate pipelines.
- EIA statistics show Michigan has more underground storage than any other state.
- According to the EIA Michigan's residential rates ranked 12th in 2006 and 6th in 2007 largely due to Michigan's abundant storage.
- Consumers currently utilizes approximately 73 Bcf for GCR purposes. MichCon utilizes approximately 68 Bcf for GCR purposes.

Supply Diversity

- Michigan encourages utilities to meet requirements from several different sources. This provides greater price diversity and protects against supply interruptions, helping maintain reliability.



Pipeline Supply Diversity

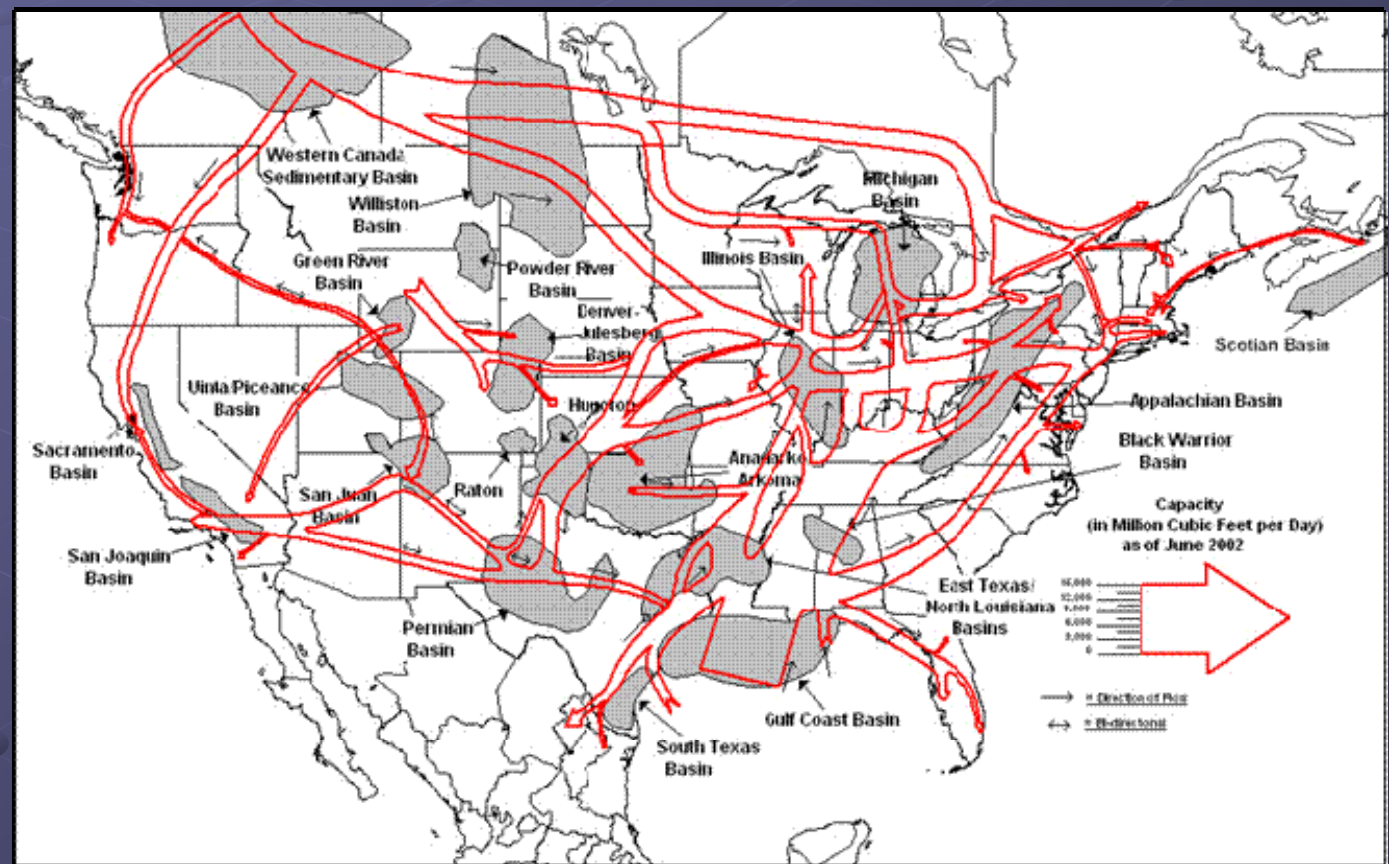
- ANR SW – Delivers Mid-continent (OK, TX) supply through the Midwest to western/central Michigan.
- ANR SE – Delivers Gulf Coast gas up through SE Michigan.
- Panhandle Eastern Pipeline – Delivers Mid-continent supply through Indiana, and Ohio ending in SE Michigan.
- Trunkline – Delivers Gulf Coast gas up to Illinois and Indiana. Owned by Panhandle Energy.

Pipeline Supply Diversity Cont.

- Vector – Receives gas at Chicago from several shippers and transports it through Illinois, Indiana, Michigan, and Canada. 40% owned by DTE Energy Co.
- Northern Natural – Delivers Permian Basin gas (NM, Western TX) through Chicago and Wisconsin to Michigan's Upper Peninsula.
- Great Lakes Gas Transmission – Begins in Manitoba Canada (Emerson) traveling through Minnesota, Wisconsin, through Upper Michigan and Lower Michigan, ending in Port Huron.

Pipeline Supply Diversity Cont.

Michigan has several gas supply basins at its finger tips. Several interstate pipelines intersect the state. One reason is the vast amount of storage the state has.



Source: Energy Information Administration, Office of Oil and Gas, Natural Gas Division, Gas Transportation Information System

MPSC Fixed Price Tier Guidelines

- December 1st of the preceding plan year: 15-20% of total annual purchases fixed for the upcoming plan year.
- April 1st of the current plan year: 25-30% of total annual purchases fixed for the current plan year.
- July 1st of the current plan year: 35-40% of total flowing winter purchases fixed for the current plan year. Flowing winter purchases do not include storage gas.
- October 15th of the current plan year: 50% of total flowing winter purchases fixed for the current plan year.

Purchasing Techniques

- Quartile Indicator Method – 36 months of historical price data is sorted into quartiles. If the current price falls in the 2nd quartile or below, fixing the price at this time is recommended.
- This method is primarily used for long term purchasing (maximum 3 years beyond the current plan year), but can be used for short term as well (fixing prices within the current plan year for use in the current plan year).

Purchasing Techniques Cont. (Short Term)

- Benchmark Price Indicator – A benchmark price is approved by the Commission. The company can choose to fix the price of gas if it falls below the benchmark price.
- 21-Day Moving Average – The current remaining plan year strip is compared to an average of this strip over the past 21 days. The company can choose to fix the price of gas if the current strip falls below the 21 day average.

Purchasing Techniques Cont. (Short Term)

- Dollar Cost Averaging (DCA) – Spreads the required volume needed to meet the fixed price tiers evenly throughout the summer months. The point(s) during the month at which the price is fixed are arbitrary.
- This method is primarily used when all others fail to give buy signals.

Purchasing Techniques Being Developed

- PLM – Price Limit Method, an indicator that would give buy signals in a long term rising market.
- Issues with this method:
 - For what length of time should gas prices rise before this method is initiated?
 - If current prices are considered high what determines a reasonable purchase price?

Purchasing Techniques Being Developed Cont.

- Adjusted Quartile Method – Uses the previously developed historical quartiles and adjusts them upward based on the change over time (slope).
- Issues with this method:
 - Over what historical time period should the slope be calculated?
 - How should the slope be applied to the quartiles in order to produce adjusted quartiles that will result in reasonable indicators?

Conclusion

- Despite the rising cost of energy, Michigan is favorably positioned to handle a price run up better than most states.
- The Commission has implemented strategies in an effort to lessen the impact of volatility and rising prices on Michigan's customers.
- Efficiency targets and minimum benchmarks for utilities may be possible in Michigan's future to encourage energy conservation.

The background is a dark blue gradient. Overlaid on this is a 3D grid of small, rounded cubes or spheres. The grid is composed of thin, light blue lines that recede into the distance, creating a sense of depth. The cubes themselves are slightly darker than the background, with a subtle highlight on their top surfaces.

Questions?