

Michigan Electric Capacity Need Forum

Michigan Public Service Commission Staff

December 15, 2004

Commission Order U-14231 (1)

- Commission has previously required Michigan utilities to provide detailed projections of near-term electric supply reliability plans
- Reliable and abundant supply of reasonably-priced electric power essential to Michigan's economy and welfare of its citizens
- Particularly concerned with inventory of base-load generating capability
- Most recent additions to Michigan's generation have been fueled by natural gas

Commission Order U-14231 (2)

- New generation, transmission, or other resources may be needed in future
- Siting and construction of new power plants are expensive and time consuming and cost recovery is in a state of flux
- Investigation into need for resources, ownership options, and cost recovery to manage risk and encourage need investment

Order U-14231 Staff Responsibilities (1)

- Analyze PSCR filings for load growth forecasts, system requirements and other information
- Review electric utility rate filings and annual reports for information on plant held for future use
- Meet with employees within the electric power industry responsible for load growth forecasting, resource additions, and siting issues

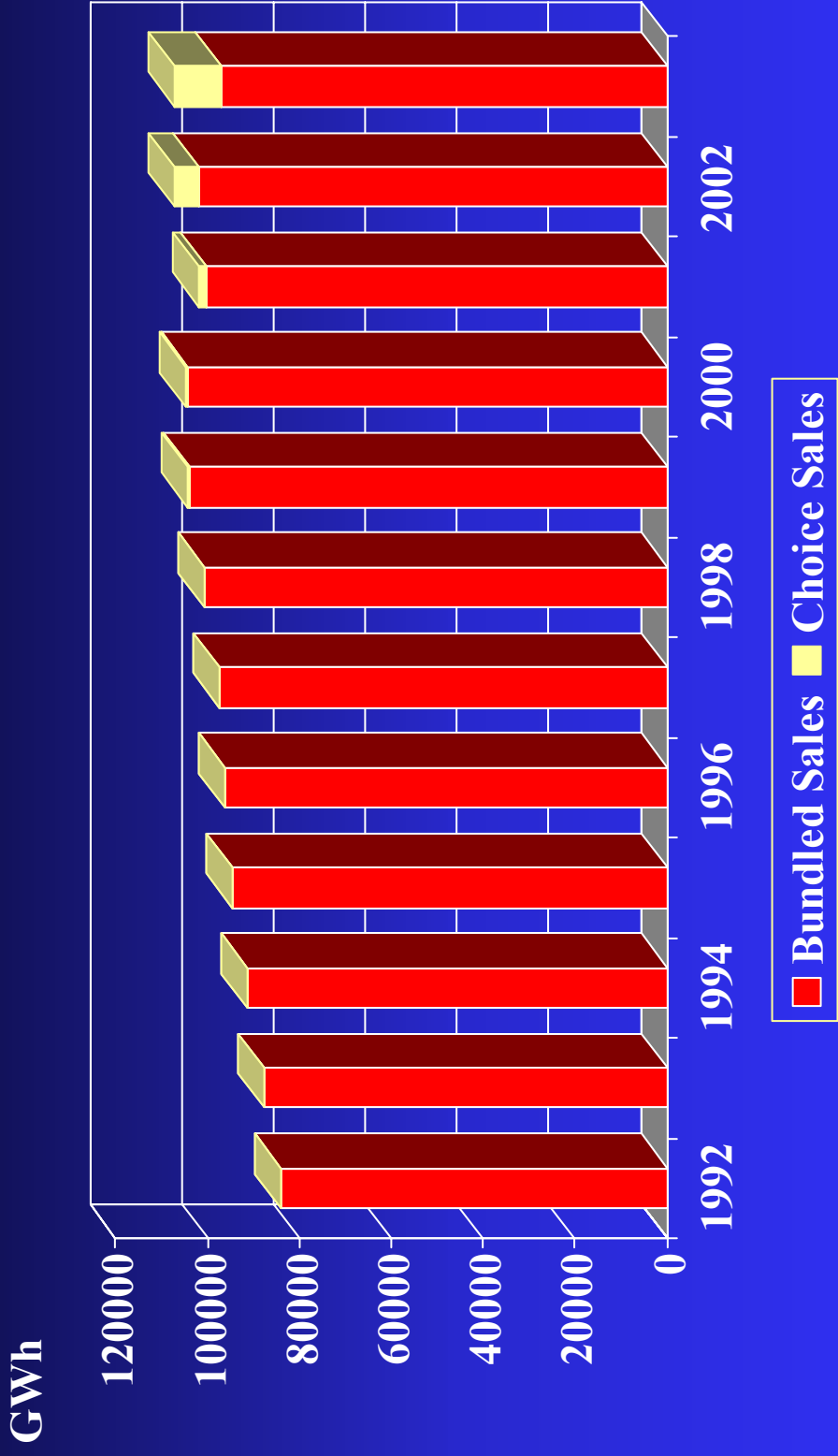
Order U-14231 Staff Responsibilities (2)

- Review transmission planning being performed by MISO
- Propose membership in a Capacity Need Forum to be approved by the Commission. Role of CNF to review data and advise Commission on resource addition policy
- Submit interim report July 1, 2005 and final report January 1, 2006

Factors Influencing Generating Capacity Decisions

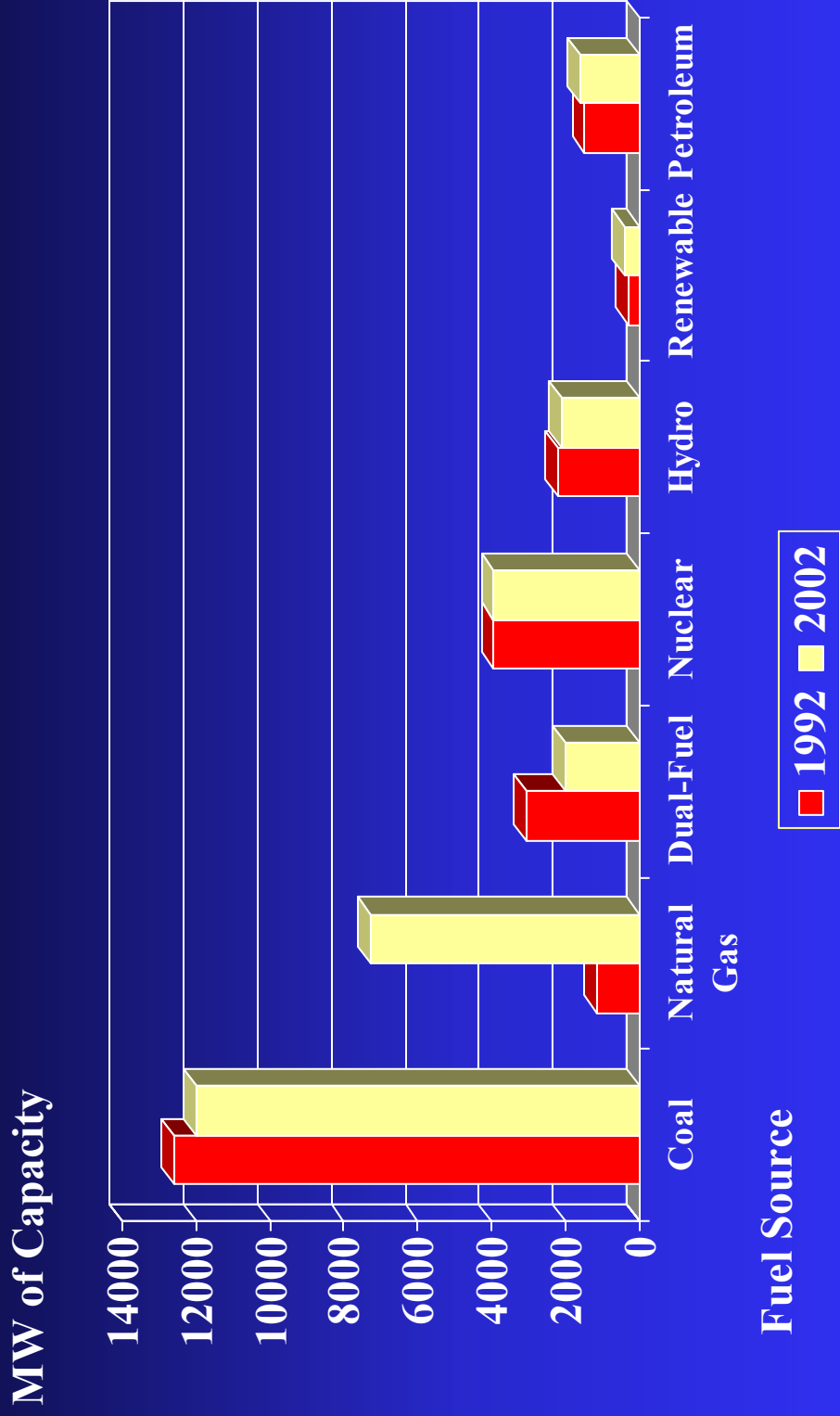
- Growth of demand
- Increased reliance on natural gas
- Age of existing generating plant
- Environmental issues
- Customer choice program
- MISO

Michigan Electric Sales



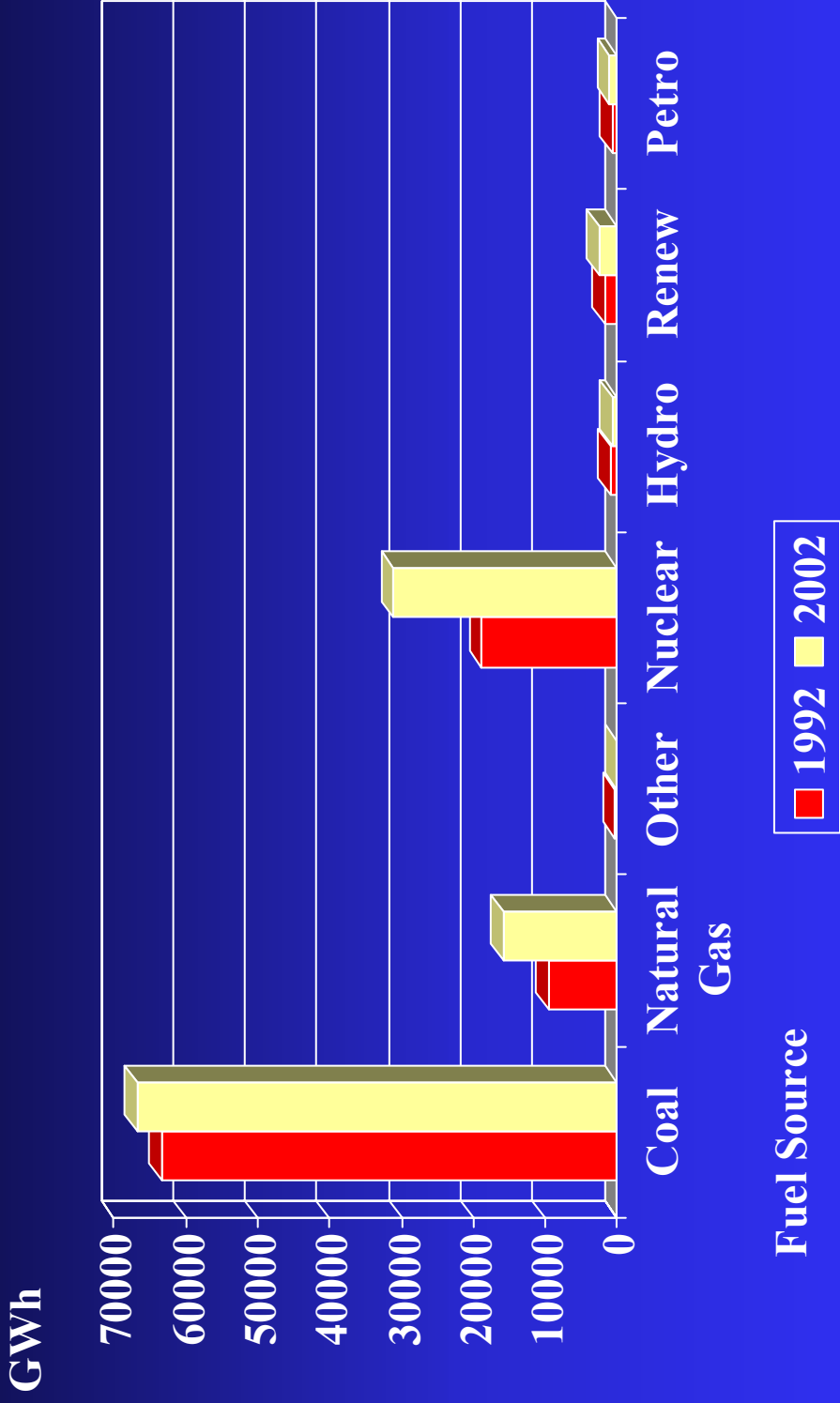
Source: EIA

Michigan Generating Capacity by Fuel Source



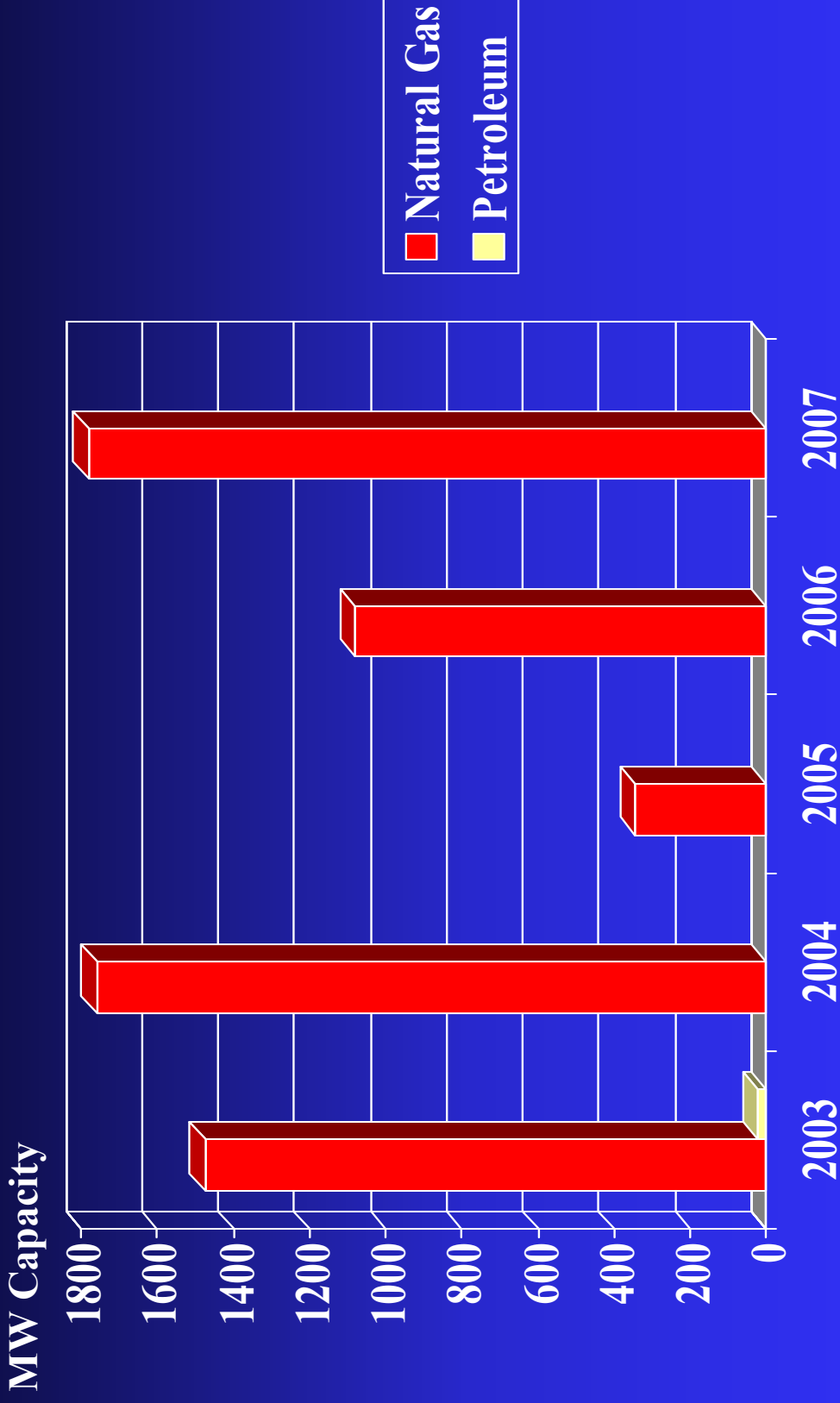
Source: EIA

Michigan Electric Generation by Fuel Source



Source: EIA

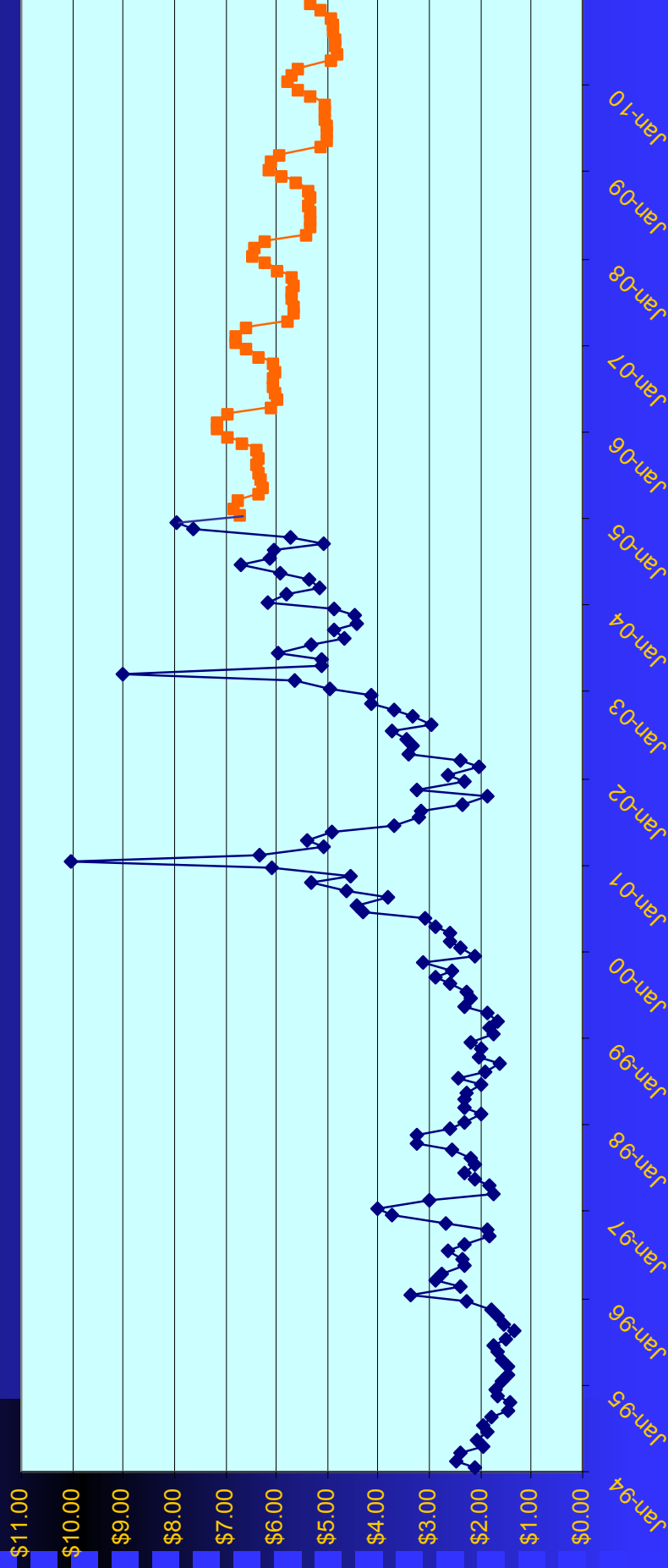
Planned Capacity Additions by Fuel Source



Source: EIA

U.S. Natural Gas Price Volatility (1994-2010)

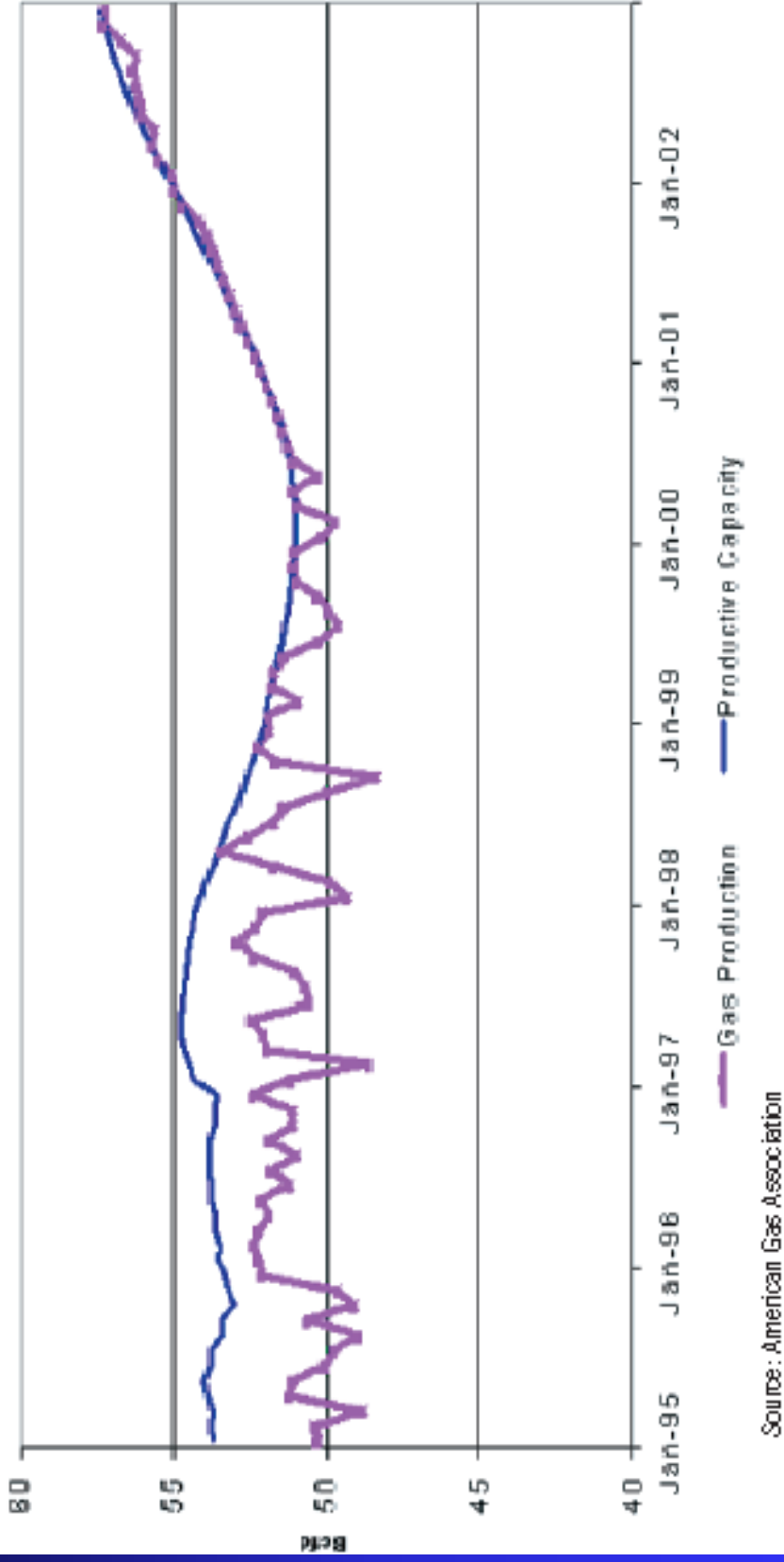
NYMEX Natural Gas Prices @12/08/04



U.S. Natural Gas Supply Trends

Flattening Seasonal US Production Constrains Seasonal Supply Response

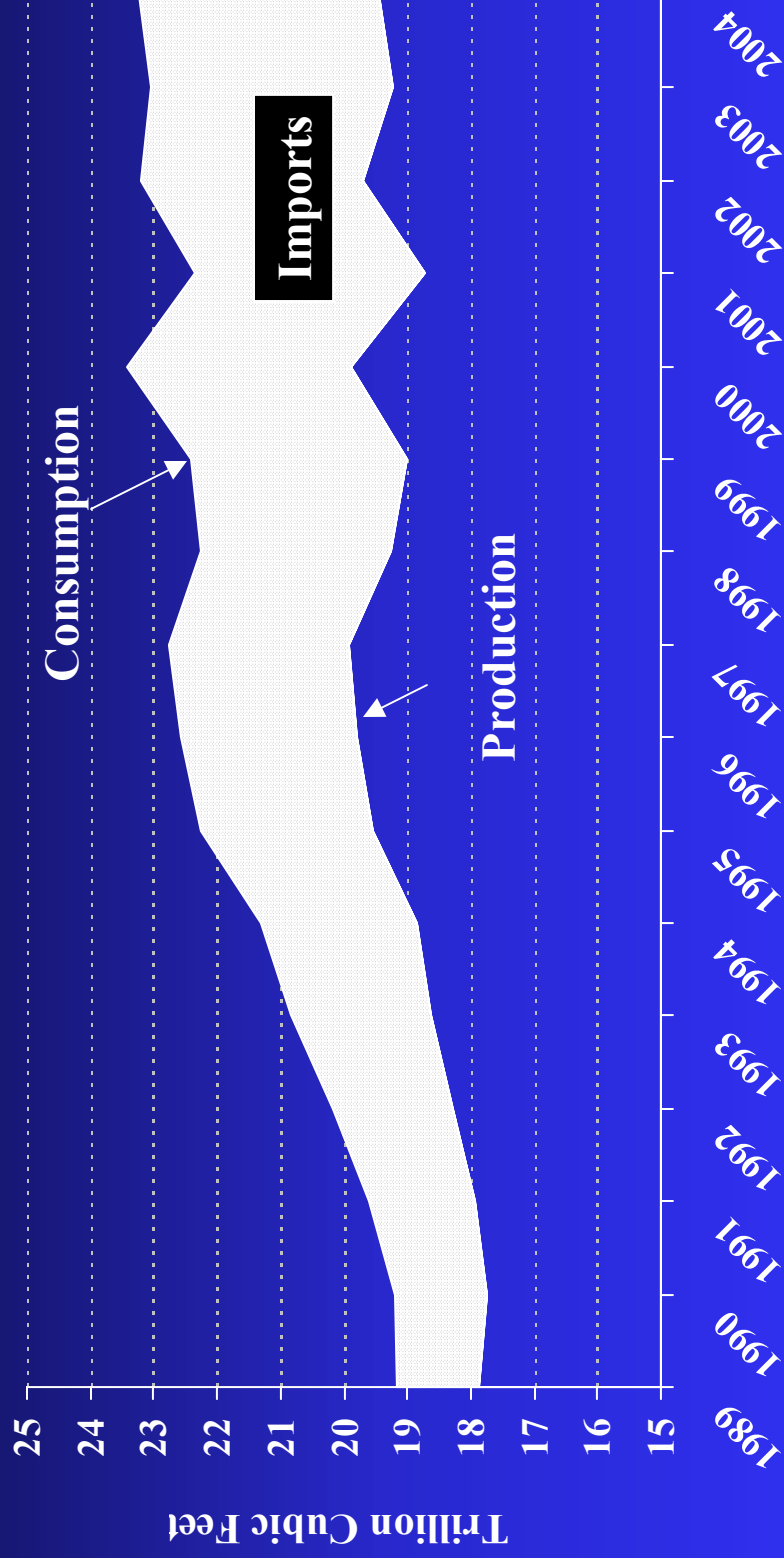
Figure 10: Gas Markets Move Toward Just-in-Time Delivery System for Natural Gas (AGA Graph of Gas Production compared to Capacity from 1995 through 2002)



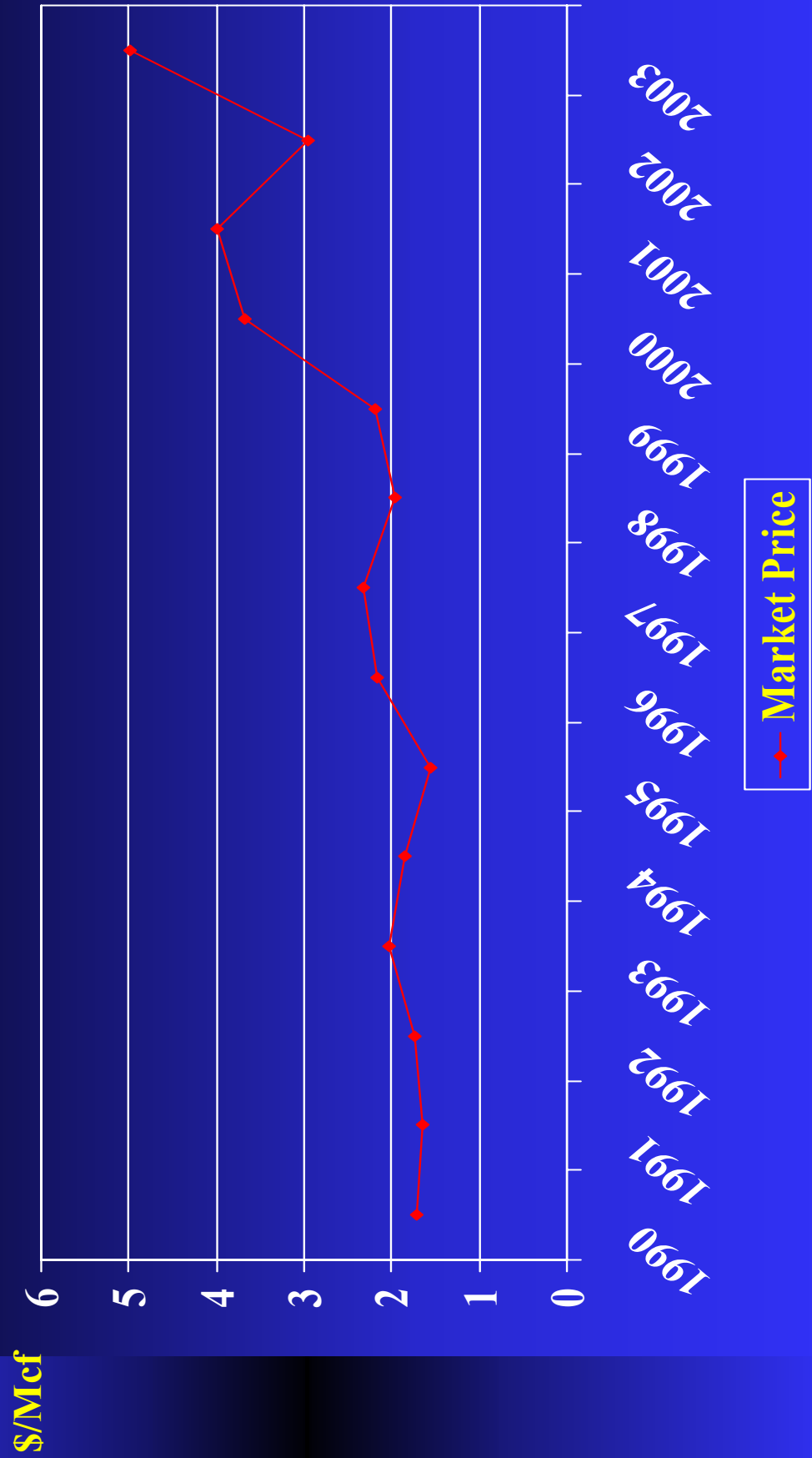
Source: FERC Natural Gas Market Assessment, January 29, 2003

Supply Trends

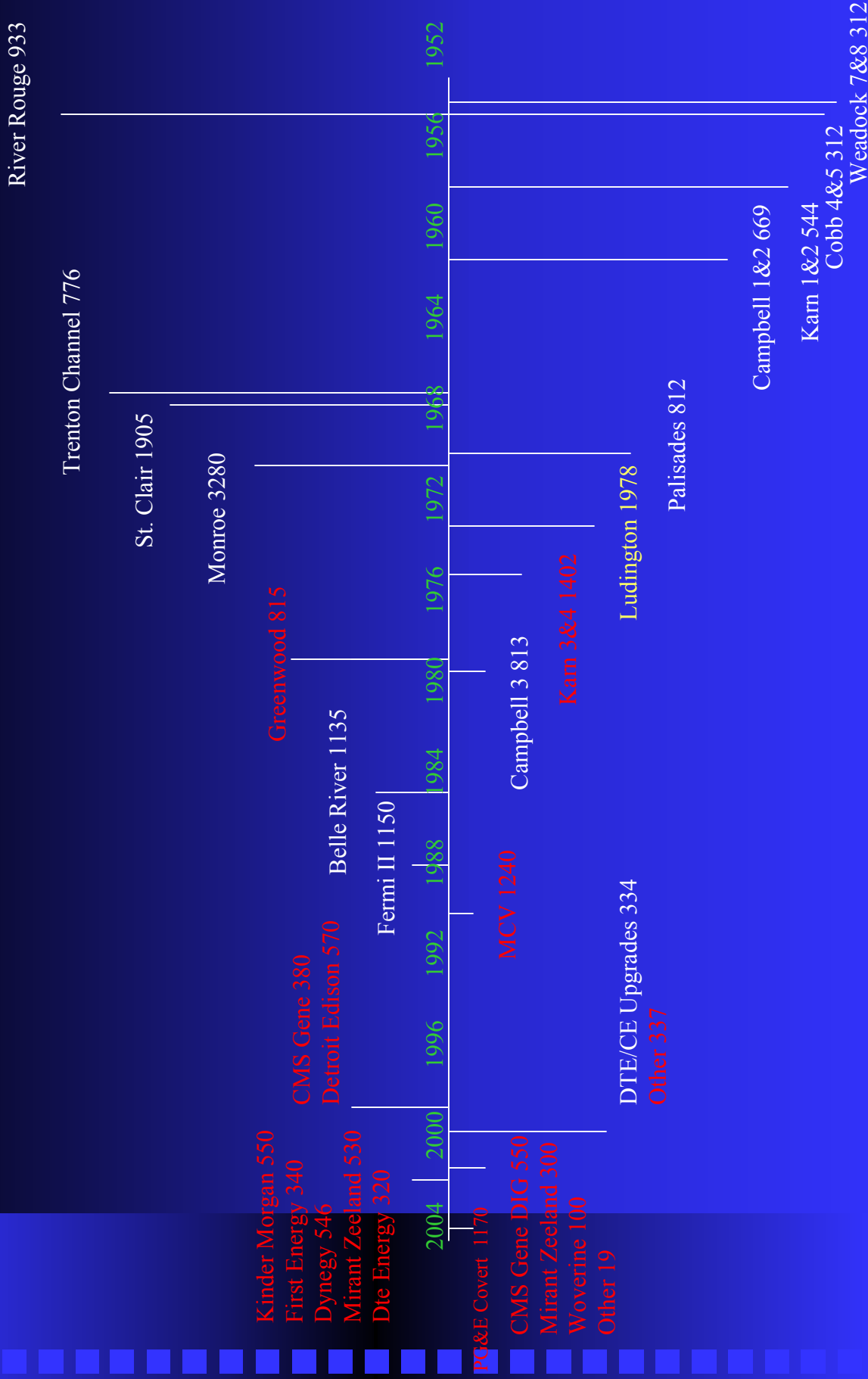
- U.S. production growing slower than demand, causing greater reliance on imports



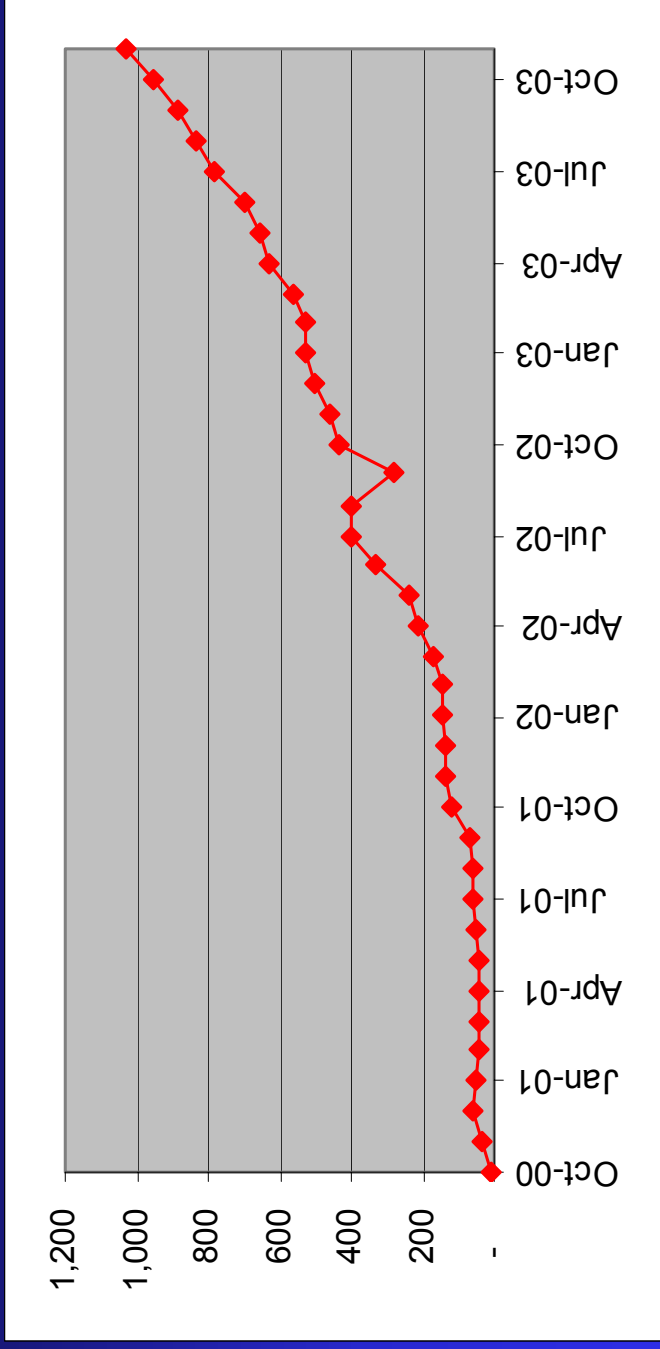
U.S. Natural Gas Wellhead Price



Michigan Major Generating Unit Additions

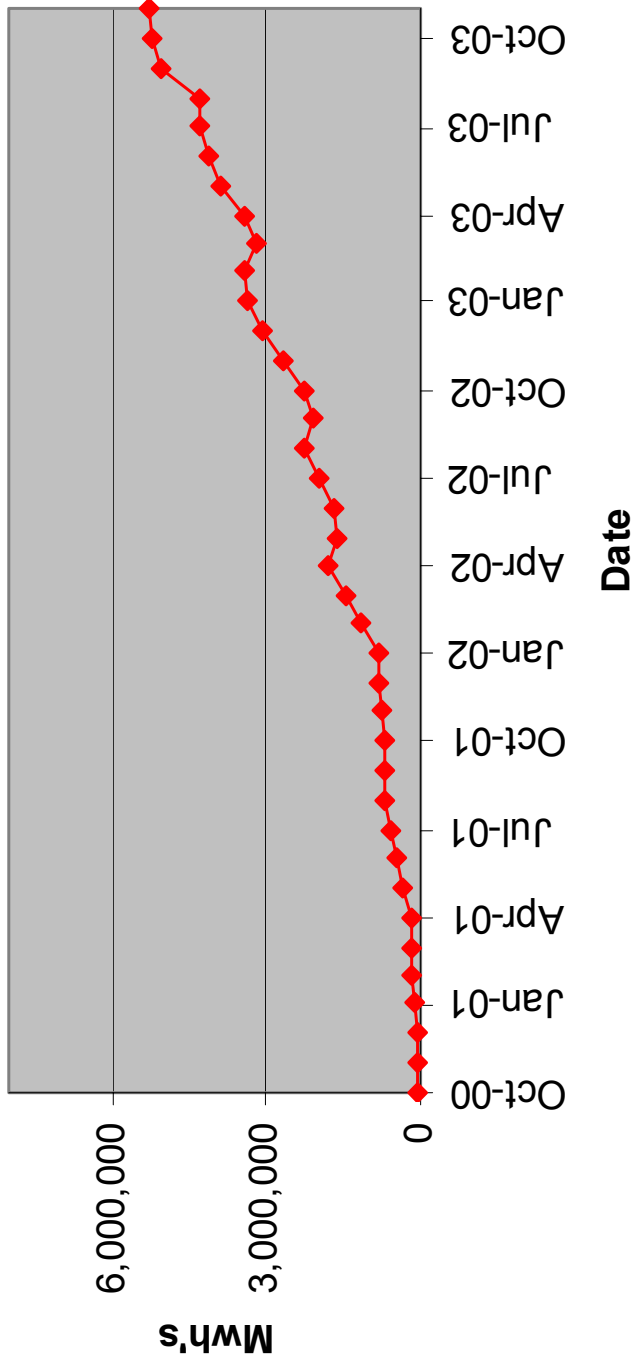


Detroit Edison Customer Choice Migration (Number of Primary Customers)



Detroit Edison Customer Choice Migration (Primary Customer Sales)

Primary Customer Choice Sales



Electric Generation Environmental Issues

- Utilities currently working to comply with CAA NOx and SOx requirements
- Governor's task force on mercury is in process of preparing recommendations
- Bush administration's clear skies proposal would cap NOx, SOx, and mercury at 70% of 2000 emission levels

MISO Related Issues

- Day two markets for energy
- Existing capacity reserve requirements
- Proposed capacity reserve program
- Transmission Planning

Final Report on Generating Options (1)

- Anticipated short-, intermediate-, and long-term demand for power
- Analysis of ability to meet projected demands from existing resources

Final Report on Generating Options (2)

- If additional resources needed, analysis of options for each time frame, including:
 - Technical considerations
 - Anticipated capital and operating costs
 - Relevant financing, ownership, and organizational considerations
 - Risks associated with options
 - Discussion of synergistic effects of options that may enhance or foreclose other options
- Recommendations

Resource Options

- Traditional, central station generation
- Transmission & distribution capacity
- Alternative generation sources like distributed generation, renewables
- Demand-response, DSM, efficiency measures

Role of Capacity Need Forum

Review data

Advise Commission on resource addition
policy issues

Capacity Need Forum Working Groups

- Demand
- Central station resource options
- Other generation resource options
- Transmission/Distribution
- Integration
- Steering committee

Demand Working Group

- Forecast of energy and demand
- Incorporate the effects of demand response and energy efficiency
- Trend of choice sales

Resource Option Working Groups

- Inventory of existing resources
- Identify new resource options including fuel type, emissions, capital costs, operating costs, and siting issues

Integration Working Group

- Determine likely resource needs
- Assess scenarios

Tentative Schedule

- Participants volunteer for working groups in December
- Working groups begin meeting in January
- Capacity Need Forum will meet monthly beginning in March
- Staff will propose table of contents for report in May meeting
- July 1st, Staff will prepare an interim report
- Forum will propose recommendations during August and September meetings
- October 15, draft final report prepared by Staff
- Forum participants respond to Staff draft by October 30
- Forum participants may respond to other participant's comments by November 15
- January 1, 2005, Staff's final report completed