

**SOUTHEAST MICHIGAN
DETROIT EDISON
FORECAST ASSUMPTIONS**

Southeast Michigan's economy will resume growing in 2005. The region's dependence on the motor vehicle industry will, however, constrain that growth. As automobile unit sales remain largely unchanged from 2004, only small to moderate increases in local vehicle assembly and component manufacture will take place. In fact, it is likely that some suppliers will abandon the area for lower cost regions or even close permanently. Such industrial restructuring will limit the area's growth.

Nationally, light vehicle production is expected to decline by roughly 1.7% year-over-year. It is expected that the introduction of several new models will, however, help to raise Detroit's output by 6.5%. Market uncertainty remains until the products prove themselves, and this poses a downside risk to the forecast.

Steel production continues to recover after being slowed from late 2003 through most of 2004 by a shortage of coke. The shortage followed a Labor Day, 2003, fire that shut down a major West Virginia coking coal mine until April 2, 2004. Even though mine reconstruction has largely reversed the fire's effects, global demand for steel inputs will remain strong and imposes a potential constraint on local production.

Total local employment will increase by 0.1 percent in 2005. Led by private non-manufacturing firms, all employment categories except manufacturing will rise. The automobile industry has recently performed below expectations, and manufacturing job prospects have diminished accordingly. Government payrolls will expand.

Private non-manufacturing employment is expected to rise by 0.5%. Within this category, Natural Resources and Construction is on target to experience the biggest percentage increase, 1.3%.

Governmental employment, which has declined for three consecutive years, will grow by 0.4 percent. As the general economy expands, increased tax revenues will be available to fund government hiring.

Manufacturing jobs will decline for the fifth consecutive year. This year's decline of 1.3 percent will follow 4.0 percent and 3.0 percent decreases in 2003 and 2004.

The Detroit Index of Coincident Indicators (DICI) comprises eight local series: Light vehicle production, estimated department store sales, CPI-U, wage and salary employment, steel production, Detroit Edison sales to commercial and industrial class customers, and weekly manufacturing earnings. Increases in the CPI-U decrease the DICI; the other seven components increase it. The DICI is expected to increase in 2005 as its components increase across the board.

Industrial production will rise by 3.5 percent. A series of automobile production cuts announced since issuance of DTE Energy's previous sales forecast has clouded the industrial production outlook. However, progressive weakening of the dollar makes American manufactured goods ever more appealing to overseas buyers, and it would not be surprising if certain domestic manufacturing industries were to enjoy a resurgence as the year progresses.

**BALANCE OF LOWER PENINSULA
CONSUMERS ENERGY
ELECTRIC FORECAST ASSUMPTIONS**

TIMING OF FORECAST:

- Forecasted deliveries and peak demands for the 2005 – 2009 time periods were reviewed and approved by Company management in April of 2004.
- All years after 2009 were estimated based on forecast trends.

KEY FORECAST INPUTS:

- Economic forecasts provided by Global Insight
 - The U.S. Industrial Production Eight Sector Average – average of the national indicators of industrial production for the following sectors: Fabricated Metals, Electrical Equipment Appliances and Components, Motor Vehicles and Parts, Paper and Products, Furniture and Related Products, Miscellaneous Industry, Chemicals, and Rubber and Plastic Products.
 - The Michigan Industrial Production Six Sector Average – average of the state indicators of industrial production for the following sectors: Fabricated Metals, Electrical Equipment Appliances and Components, Transportation Equipment, Furniture and Related Products, Chemicals, Plastic and Rubber Products.
 - Composite Michigan Transportation Index - The Transportation Equipment Production and Transportation Equipment Employment indexes are averaged together to create a composite index.
 - Michigan Housing Starts
- 15 Year average used for Cooling Degree Days and Heating Degree Days
- Leap days adjustments are added as appropriate.
- Adjustments are made for expected major industrial plant closings.

RESIDENTIAL SECTOR FORECASTS:

- The Residential class forecasts were developed from forecasts of customer growth and average use per customer.
- Customer growth was estimated as follows:
 - A regression model was developed to predict quarterly growth in residential customers based on projected housing starts for Michigan.
 - Quarterly customer growth was then allocated to each month based on the company's historical experience.
 - Trend analysis was then performed on Space Heating customer growth to project the number of Space Heating customers for each month.

- Residential Domestic customers were then calculated by subtracting the Space Heating customer values from the projected Total Residential customer forecast.
- Average use forecasts for the Residential Domestic and Residential Space Heating customer groups were developed separately from regression models that quantify the influence of billing days, time-series trends, weather conditions, and seasonal factors on the average monthly usage of each customer group.
- The forecasts of monthly average use were then multiplied by the forecasts of monthly customers for each customer group to project the total deliveries for each group.

COMMERCIAL SECTOR FORECASTS:

- The Commercial forecast was developed using regression analysis that quantifies the influence of time-series trends, weather conditions, and seasonal factors on monthly commercial class usage.

INDUSTRIAL SECTOR FORECASTS:

- The GM/Delphi usage forecast was developed using regression analysis that quantifies the influence of Michigan Transportation Equipment sector economic activity, seasonal factors, and historical plant closing and efficiency improvements on quarterly usage of General Motors and Delphi accounts.
- The Industrial Other usage forecast was also developed using regression analysis that quantifies the influence of U.S. and Michigan industrial production activity, and seasonal factors on the quarterly usage of industrial customers other than General Motors, Delphi, and one Dow Chemical account in Midland that only buys power from Consumers Energy when its primary source of electricity is unavailable.

DEVELOPMENT OF OTHER SECTOR FORECASTS:

- The Other Class has three forecast components:
 - Street lighting usage was forecast using regression analysis of time series growth trends for various types of lighting fixtures. Energy consumption is estimated by multiplying the number of each type of fixture by its associated wattage and the number of operating hours in each billing month.
 - Interdepartmental usage was forecast by regression analysis to estimate the influence of time-series trends and various seasonal factors on monthly usage.

OTHER FORECAST ITEMS:

- Monthly calendar deliveries were estimated by first calculating the historical actual unbilled sales for each month during the 1989 through 2003 time period. A historical average was calculated for

each calendar month and applied to the forecasted cycle-billed deliveries to estimate calendar deliveries volumes for each month.

- Generation requirements are estimated by dividing the calendar deliveries for each time period by the Company's system efficiency factor of 92.97%.
- The summer peak forecast was developed using regression analysis that quantifies the influence of customer growth, average usage of the industrial class and other class customers during the months of July and August, average temperatures on the day of the system peak, and the peak day average dew point temperature variance from an expected average dew point temperature. Also quantified in the regression analysis of the summer peak are estimated impacts of extreme conditions defined as:
 - Time periods when there are no 90 degree days during the months of July and August, and
 - Time periods when there are more than twelve 90 degree days during the months of July and August

WOLVERINE POWER COOPERATIVE FORECAST ASSUMPTIONS

Wolverine's forecast is developed at the member-distribution cooperative level and rolled up to create a single Wolverine system forecast, which includes transmission system losses and own use. This 15-year forecast is updated annually.

Residential Class

Wolverine's forecasting effort is focused on the residential class since this class forms the majority of sales in all four of the member distribution cooperatives.

The residential energy sales forecast is produced by combining independent projections of consumers and use per consumer for each cooperative. The four member forecasts are added to obtain the Wolverine forecast. Residential consumer projections are made for each of the four members and include the following county demographic factors:

- Households
- Share of county housing units served by the cooperative

Population and persons per household forecasts that are consistent with the household forecasts are also included to allow comparison with other demographic forecasts that may be available from local or state sources.

County level demographic projections are taken from Woods & Poole Complete Economic and Demographic Data Source and from the National Planning Association Regional Economic Projections Series. Forecasts are prepared based on each source and are then averaged to obtain the final forecast.

A combined time series, cross sectional econometric model is used to project residential use per consumer for each cooperative and includes real electric price, heating degree-days and cooling degree-days adjusted by the trend in equivalent central air-conditioning.

Consumers and usage projections for each member system are combined to yield the residential sales forecasts for each member cooperative and for the total Wolverine system.

Seasonal Class

Separate econometric equations are used to develop consumer forecasts for each of the member cooperatives with seasonal customers. The seasonal consumer and use per consumer forecasts are combined to yield the seasonal sales forecasts for each cooperative with seasonal sales and for the total Wolverine system.

Commercial and Industrial Classes

For these classes, energy sales forecasts are developed first with consumer forecasts being considered subsequently to provide reasonability checks in terms of the use per consumer trends. Commercial and industrial forecasts are based on both facility-specific individual forecasts for short-term forecasting and aggregate econometric models for long-term expansion projections.

Other Classes

Wolverine's members sell to street and highway lighting accounts, public authorities and irrigators. Forecasts of these other classes, which represent less than 2% of total Wolverine sales, is based on simple trending.

Wolverine Total Energy Requirements

Wolverine's total annual energy requirement is comprised of sales to the member systems (residential, seasonal, commercial and industrial and other) measured at delivery substations plus Wolverine's own use plus transmission delivery losses from generator bus bars and from purchase delivery points.

**LOWER PENINSULA MUNICIPALS
FORECAST ASSUMPTIONS**

**UPPER PENINSULA
ELECTRIC FORECAST ASSUMPTIONS**

DEMAND ASSUMPTIONS
(For use by Central Station Work Group)

RISKS AND UNCERTAINTIES