Semiannual Projections of Energy Supply and Demand Summer Outlook 2009

This publication is available on the MPSC web site at **http://www.dleg.state.mi.us/mpsc/reports/energy/**

Michigan Department of Energy, Labor & Economic Growth
Public Service Commission
PSC-PUB 0017 (Rev. 04/09)

Preface

The Michigan Energy Appraisal is a semi-annual assessment of Michigan's energy markets. The assessment assists in identifying potential supply problems, including adequacy of supply, weaknesses in the distribution system, and energy price changes. This report is focused on recent events impacting supply and prices, expected conditions, and changes over the next six months.

The scope of the analysis varies by energy source. Michigan's electricity prices, supply and availability are largely determined by events in Michigan and the Midwest. Natural gas supplies and prices are closely tied to national trends. Petroleum product markets in Michigan are affected by international market conditions and events and regional refinery production. For the appraisal, recent historical balances between Michigan's energy consumption and supply are analyzed, and consumption and supplies are projected. Actual and expected energy prices are reviewed to identify changes impacting consumer costs. Generally, the fall appraisal focuses on the winter heating season, and the summer appraisal focuses on summer energy use, including peak electricity supply and demand and gasoline for the summer driving season.

This report is prepared by the Management Services Division, Regulated Energy Division, and the Operations & Wholesale Markets Division of the Michigan Public Service Commission (MPSC), Department of Energy, Labor & Economic Growth, State of Michigan.

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The Energy Appraisal is available at: http://www.dleg.state.mi.us/mpsc/reports/energy/. This site is linked to other energy-related sites, including the federal Energy Information Administration (EIA) at http://www.eia.doe.gov. The EIA site contains information on a variety of energy sources.

Comments or questions on this appraisal are welcomed and may be directed to Jeffrey Pillon, Michigan Public Service Commission, P.O. Box 30221, Lansing, Michigan 48909, phone (517) 241-6171, fax (517) 241-6011, or e-mail pillonj@michigan.gov

Issued: May 1, 2009

Printed under authority of: MCL 10.82
Number of copies printed: 225
Total cost: $292.39
Cost per copy: $1.30

HIGHLIGHTS
Energy Appraisal – Summer 2009

The demand for energy in Michigan is expected to continue to decline in 2009. These declines are due to the continued reduced level of economic activity in the state and the nation. Should the economy begin to show resumed growth in the later part of 2009, energy demand may begin to pick up which would serve to offset the degree of the declines shown in these forecasts. Given the anticipated demand levels, no supply issues are anticipated, and petroleum and natural gas prices are expected to remain relatively stable. It should be noted that the uncertainty of the economy also translates into higher levels of uncertainty in these projections which are based on the future course of the state's economy.

Electricity – Electricity prices could increase depending on two rate cases currently pending action by the Michigan Public Service Commission. Both Detroit Edison and Consumers Energy have requested significant increases in electricity prices. These increases average 8.3 percent across all customer classes with the largest increase having been requested for the rates charged to residential customers. The availability of electricity over the summer is assured given the anticipated decline in projected sales.

Natural Gas – Lower natural gas prices and lower demand are expected to assure sufficient supply and lower heating costs for the coming winter compared to last year. Total annual natural gas sales in Michigan for 2009 are projected to be 767.1 billion cubic feet (Bcf), a decrease of just 0.1 percent over 2008. This is based on normal weather for the remainder of the year. Despite the colder than normal weather during the first quarter of 2009, the lower level of economic activity has served as an offset holding demand essentially flat.

Petroleum – An increase in surplus world oil production capacity can more than offset most anticipated supply problems which means gasoline and other petroleum product prices will remain near current levels for the balance of the year. World oil demand is expected to decrease in 2009 by 1.35 million barrels per day (m/b/d) to a total of 85.8 m/b/d. This projection is from the EIA's April 2009 "Short-Term Energy Outlook." Global oil prices fell precipitously in the last half of 2008, as recessionary affects caused oil demand to fall. The price of crude oil dropped from a high of $137 per barrel in July of 2008 to almost as low as $36 in December of 2008 and is currently approximately $50 per barrel.

Motor Gasoline – For 2009, gasoline consumption is projected to continue its decline, falling an additional 4.1 percent from 2008 levels. This follows a 4 percent decline last year, and continues the trend of declining gasoline usage seen in Michigan over the last four years. For 2009, gasoline use will be down nearly 762 million gallons from 2004, the last year in which gasoline sales increased.

Distillate Fuel Oil - Distillate sales in Michigan in 2009 are projected to continue to decline by an additional 7.7 percent to just over 1.1 billion gallons. Diesel fuel remains the prime component of distillate demand, with the majority being used by trucks on highways. The current economic slowdown is the primary cause for the continued decline in demand as fewer good are shipped by trucks and rail.

The American Recovery and Reinvestment Act of 2009 – This act contains several provisions that deal with the energy sector, including loans and investments in energy efficiency and renewable energy technology. Michigan is expecting to see increased funding for the low income Weatherization Assistance Program, the State Energy Program, the Energy Efficiency and Conservation Grants program and Smart Grid investment amongst other initiatives.

May 1, 2009

Michigan Public Service Commission
Department of Energy, Labor & Economic Growth

Electricity

Demand

The economic recession is having a major impact on electricity use in Michigan. Michigan's total electric sales are projected to decline 6.7 percent in 2009, assuming normal summer temperatures, following a 3.4 percent decrease seen in 2008. Sales in 2008 were lower than expected due to the worsening economic conditions, which caused declines in all sectors: residential, commercial and industrial. Part of last year's decline can be attributed to the cooler than normal summer, which saw cooling degree days[1] 7.3 percent below normal, significantly cooler than the summer of 2007.

The projection for 2009, of a further 6.7 percent decline in electricity sales, is based on projections of economic activity from Global Insights and the expectation of normal summer weather. Should the economic decline be greater than the projection for this year, sales will be lower; correspondingly a more rapid recovery in the latter half of 2009 would reduce the rate of decline. This is comparable to the projection by Consumers Energy (Consumers) anticipating a 4.5 percent decline in sales in 2009. Detroit Edison (Edison) predicts only a 1 percent sales decline in 2009. In 2007, these two companies accounted for 86 percent of total electricity sales in Michigan. The uncertainty of the economy also translates into uncertainty for these projections.

Regionally, in the states that comprise the East North Central Region (Illinois, Indiana, Michigan, Ohio, and Wisconsin), the Energy Information Administration (EIA) in the April 2009 Short Term Energy Outlook is projecting electricity sales in 2009 to increase 1.7 percent in the residential sector and 0.6 percent in the commercial sector, while the industrial sector is projected to decline by 14.3 percent. These numbers would result in an overall sales decline of 4.6 percent for all sectors.

Industrial electric sales are projected to decline steeply due to the sharp downturn in the economy. This is based on the Michigan Industrial Production Index which is a measure of industrial capacity utilization and production. Global Insights shows a decline in the Michigan Industrial Production Index of 6.5 percent in 2008 compared to 2007, and for 2009 is projecting a severe contraction of 14.7 percent.

This summer, the combined peak electric demand in the Edison and Consumers service areas is projected to total 20,015 MW. Excluding retail open access and interruptible loads for Edison and Consumers, the peak demand is projected to be 18,684 MW. The in-state generating capacity for the two utilities, including existing capacity contracts, totals 19,637 MW making the difference between projected summer peak demand and available capacity

[1] **Cooling degree-days:** A measure of how warm a location is over a period of time relative to a base temperature, most commonly specified as 65 degrees Fahrenheit. The measure is computed for each day by subtracting the base temperature (65 degrees) from the average of the day's high and low temperatures, with negative values set equal to zero. Each day's cooling degree-days are summed to create a cooling degree-day measure for a specified reference period. Cooling degree-days are used in energy analysis as an indicator of air conditioning energy requirements or use. Source: Energy Information Administration.

equal to 953 MW. To ensure an adequate reserve margin, additional power purchases have and will be made by both Edison and Consumers.

The actual 2008 peak demand for Consumers and Edison was 19,056 MW, which occurred on July 16, 2008. The only customer class that was interrupted during this period was the residential air conditioner users of Edison who were on the interruptible plan. During a normal summer of operations, Edison can cycle the interruptible air conditioner customers for up to eight hours a day to relieve local circuit loadings if necessary.

The demand for power to serve retail open access (electric choice) declined again in 2008 to 325 MW of coincident load in the Consumers and Edison service territories. The number of retail open access customers who chose alternative suppliers decreased to a total of 3,717 customers by the end of 2008. This represented over three percent of the total sales in the combined Edison and Consumers service territories (down from about four percent in 2007).

Supply

The total generating and purchased power supply for Michigan this summer is expected to be over 21,246 MW. Calculating the projected sum of the peak demand, less retail open access and interruptible loads, provides a reserve margin of about 13 percent. Consumers plans to purchase a total of 326 MW of seasonal capacity, and Edison intends to purchase 1,283 MW.

Michigan relies on power purchases from out of state, so availability of generation in the Midwest is important. The Midwest Independent System Transmission Operator (MISO) manages regional wholesale power markets, reliability, and planning. In its annual summer assessment, MISO estimates a range of expected demand, available generation, and demand-reduction resources. MISO estimates that 124,000 MW of potential available resources will be available (according to the 2008 assessment report, the most recent available, MISO will issue the new report on May 1, 2009). The mid-range of expected demand is 102,000 MW (reflecting a 50 percent probability that it will be higher or lower). This provides a reserve margin of 21 percent, which is higher than reserve margins for Edison and Consumers. This means that additional resources may be available if demand in Michigan is higher than expected.

For coal-fired generation, utilities continue to monitor shipments of western coal for slowdowns as the railroads continue to upgrade their tracks to meet increased shipping demands. Approximately sixty percent of Michigan's electricity is generated using coal. In the past year, prices for eastern Appalachian coal have increased to almost $140 per ton during the summer peak time; however, over 80 percent of the coal used in Michigan for electricity generation comes from western sources in Wyoming and Montana. The price for this coal has ranged from $10 to $15 per ton over the past two years and dropped to $8.75 per ton in the week ending April 10. Therefore, high eastern coal costs are less of an issue in Michigan.

In the Upper Peninsula (UP), electric power needs are expected to be met this summer; however, this is based on the availability of the Presque Isle power plant in Marquette and

adequate transmission interconnection with Wisconsin. This reliability is further bolstered by the ability to interrupt substantial industrial load. The American Transmission Company that serves the UP continues to work on a transmission improvement program. A number of projects have been completed that will increase the reliability and capacity of that system.

Price

A Consumers residential customer using 500 kilowatt-hours (kWh) per month currently pays $55.16 (11.03 cents per kWh using the April 2009 PSCR factor). An Edison residential customer using 500 kWh per month currently pays about $60.37 (12.07 cents per kWh using the April 2009 PSCR factor).

Electricity prices this year may increase as a result of currently pending rate cases filed by Detroit Edison (Case No. U-15768) and Consumers Energy (Case No. U-15645).

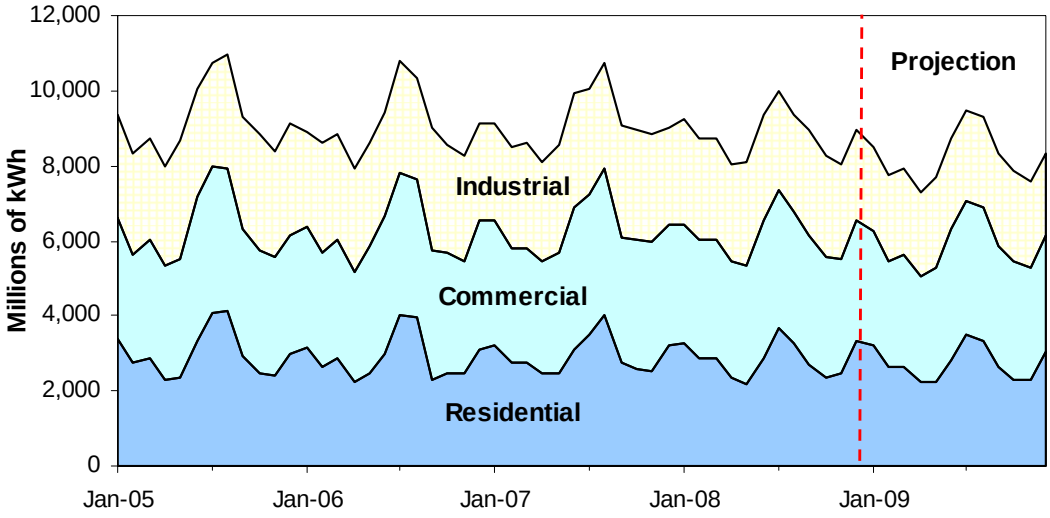
Detroit Edison has requested an average increase, for all customers, of 8.1 percent, with the largest increase, 11 percent, requested for residential customers. Nearly half of the increase that Detroit Edison has requested is due to falling sales which requires fixed cost to be spread over fewer kWh of sales, thus increasing rates to meet the revenue required to supply the anticipated demand for electricity.

Consumers Energy has requested an average increase for all customers of 8.4 percent with the largest increase of 16.4 percent requested for residential customers. Consumers cites the need for additional revenue due in part to new investment in distribution facilities, generation plants, and new technology; ongoing investments in Clean Air Act and other electric utility assets to provide reliable service, and compliance with environmental and legal requirements; declining sales and the current Michigan economy; and increases in operation and maintenance costs.

The Michigan Public Service Commission (MPSC) also directed Consumers Energy Company to file by April 29 the tariffs (rates), if any, that it proposes to implement anytime after May 14 and prior to Nov. 19. The MPSC issued the order in response to a motion by the Association of Businesses Advocating Tariff Equity (ABATE) in Consumers Energy's ongoing electric rate case. On April 9, ABATE filed a motion for a temporary order to prevent or delay the implementation of new rates by Consumers Energy on May 14. Under Public Act 286 of 2008 (PA 286), a utility may implement a rate increase - up to the amount it has requested - 181 days after the filing of its complete application, if the MPSC has not yet issued an order in the case. That date is May 14 in Case No. U-15645.

The Commission has not as yet issued a final order in either of these cases. In the final order in these cases, the Commission could accept, reject or modify the requested increases in rates.

Michigan Electricity Sales



Michigan Electricity Sales Projection
(Millions of kWh)

			Residential	Commercial	Industrial	Total
Historical	2006	Total	34,734 r	39,845	33,830	108,409 r
	2007	Total	35,356 r	40,485 r	33,611 r	109,452 r
	2008	Total	34,324 r	39,320 r	32,078 r	105,722 r
Projection	2009	January	3,195	3,083	2,205	8,483
		February	2,627	2,832	2,280	7,739
		March	2,664	2,969	2,309	7,941
		April	2,219	2,844	2,246	7,309
		May	2,215	3,073	2,405	7,692
		June	2,794	3,501	2,435	8,730
		July	3,495	3,579	2,377	9,450
		August	3,337	3,572	2,373	9,281
		September	2,626	3,208	2,480	8,314
		October	2,289	3,146	2,416	7,852
		November	2,318	2,984	2,295	7,597
		December	3,015	3,135	2,149	8,299
	2009	Total	32,791	37,925	27,971	98,687
	2008-2009 change		-4.5%	-3.5%	-12.8%	-6.7%

NOTE: Projected electricity sales are based on historical trends.

SOURCES: Historical Data -- Energy Information Administration, U.S Department of Energy.

Projection -- Energy Data and Security, MPSC., r = revised

Natural Gas

Demand

Total annual natural gas sales in Michigan for 2009 are projected to be 767.1 billion cubic feet (Bcf), a decrease of just 0.1 percent over 2008. This is based on normal weather for the remainder of the year. Unlike last winter, which was slightly warmer than normal, this winter was unusually cold. This past winter was 7.8 percent colder than last winter and 4 percent colder than normal. Colder winter weather causes an increase in demand for natural gas, causing higher gas bills to maintain the same temperature. Despite the colder than normal weather during the first quarter of 2009, the lower level of economic activity has served as an offset, holding demand essentially flat.

Supply

Natural gas volumes in underground storage for the lower 48 states were 1,823 Bcf as of April 24th, which is 22.5 percent above the 5-year average inventory. At this time in 2008, levels were 25.4 percent lower at 1,359 Bcf. Natural gas production in Michigan is projected to decline by 5 percent from 155.4 Bcf in 2008 to 148.1 Bcf in 2009, marking the twelfth consecutive year of declining production from gas wells in Michigan. With declining Michigan production and increasing demand, net interstate deliveries are projected to be 648.3 Bcf in 2009. Natural gas storage levels are normally built up during the summer months and are projected to be 609.5 Bcf in October 2009 which means Michigan's storage working gas capacity will be nearly filled to capacity. Due to the large storage capacity in Michigan, this should be sufficient to meet anticipated demand for the coming winter.

Price

Natural gas wholesale (spot) prices have fallen steadily over the past year and are currently well below typical ranges for this time of year. On April 22, the Henry Hub natural gas spot price was $3.48 per million cubic feet (Mcf), which was 12 cents, or 3.3 percent, lower than the price of $3.60 last Wednesday. This Wednesday's price of $3.48 was 66 percent lower than the price of $10.33 per Mcf on the fourth Wednesday in April 2008 and 74 percent lower than the high of $13.40 per Mcf recorded in July of 2008. Current Henry Hub prices are the lowest seen in six years.

As stated above, U.S. (lower 48 states) storage levels for this time of year are 22.5 percent above the five year average and more than 34.1 percent above storage levels one year ago. These increased average storage levels and reduced demand are exerting downward pressure on natural gas prices. The Energy Information Administration is projecting a Henry Hub spot price of $4.24 per Mcf for 2009 and $5.83 per Mcf for 2010.

The weighted-average utility gas cost (storage gas plus market purchases) for Michigan is projected to be $8.18 per Mcf for the April 2009 through March 2010 period. A residential customer's annual bill for the period of April 2008 through March 2009 was about $1,208.

For the 2009-2010 period, an annual bill is projected to be about $1,067 based on April 2009 Gas Cost Recovery (GCR) billing factors. If prices remain at current levels, the average annual gas bill is expected to be less than last year's bill.

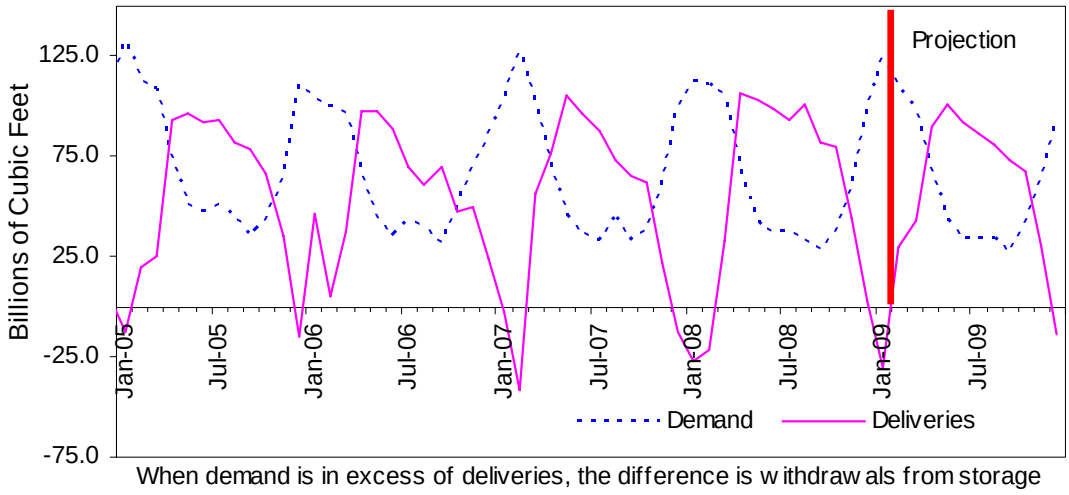
Additional factors may influence the price of natural gas over the summer. A warm summer causes electricity generators to use more natural gas for peak generation. The added demand can increase the price of natural gas during the summer when it is injected into storage for use for the following winter. An active hurricane season in the Gulf of Mexico could drive up prices if significant damage occurs to natural gas production or distribution infrastructure. A forecast released by Colorado State University predicts slightly above average hurricane activity in the Gulf of Mexico for 2009.

While it is expected that this year's hurricane season will be slightly above average, it is expected to be less active than in recent years. Forecasters at Colorado State University released an updated forecast on April 7, 2009[1] in which they predict a total of 12 named storms of which six are forecasted to be hurricanes. Of those six hurricanes, only two are predicted to be major hurricanes with maximum wind speeds of 111 mph or greater. Cooler ocean temperatures in the Atlantic Ocean and neutral El Nino/La Nina conditions (referring to sustained sea surface temperature anomalies) in the Pacific Ocean are the main reason for this forecast. In 2008, there were 16 named storms including eight hurricanes, five of them major.

The continental U.S. is beginning the storage injection season with inventories 22.5 percent above the 5 year average, which could put slight downward pressure on summer gas prices. If this summer is significantly warmer than normal, the increased use of natural gas to meet peak electric loads could have a more significant effect on price than in the past. Natural gas prices will continue to be influenced by the state of the U.S. economy, world energy markets, and a tendency to track crude oil prices, which are currently at reduced levels as well.

[1] See http://tropical.atmos.colostate.edu/forecasts/

Michigan Natural Gas Supply & Demand



Michigan Natural Gas Supply and Demand
(Billions of Cubic Feet--BCF)

			Total Demand	Net Interstate Deliveries	Michigan Production	To (From) Storage	Storage Balance
Historical	2006	Total	767.4	693.3	174.8	100.7	545.6
	2007	Total	798.9 r	591.8 r	161.4 r	-48.6	497.0
	2008	Total	767.8 r	612.4	155.4 r	-30.6	466.4
	2009	January	124.1	-30.9	12.8	-142.1	324.2
Projection		February	109.7	29.4	11.7	-68.5	255.7
		March	97.6	42.6	12.8	-42.2	213.5
		April	67.5	89.8	12.2	34.5	248.0
		May	43.1	100.5	12.4	69.7	317.7
		June	33.6	91.9	12.2	70.5	388.3
		July	34.0	86.4	12.5	64.9	453.1
		August	34.1	81.1	12.6	59.6	512.8
		September	27.4	72.7	12.3	57.6	570.4
		October	40.5	67.2	12.4	39.1	609.5
		November	62.7	31.0	12.0	-19.7	589.8
		December	92.8	-13.5	12.2	-94.1	495.7
	2009	Total	767.1	648.3	148.1	29.3	495.7
2008-2009 change			-0.1%	5.9%	-4.7%		6.3%

NOTES: Projected demand assumes normal weather for the remainder of the year. The Michigan production series is compiled by the Operations & Wholesale Markets Division, MPSC. Net interstate deliveries are calculated using total demand less the sum of Michigan production and change in Michigan storage. Storage balance is end of month/year.
SOURCES: 'Historical Data -- Demand and Storage from Energy Information Administration, U.S. Department of Energy.
r = revised data; Projection – Energy Data & Security Section, MPSC.

Petroleum

World Outlook

World oil demand in 2009 is expected to decline to 85.8 million barrels per day (m/b/d), a drop of almost 1.35 m/b/d from 2008. Although crude oil prices have dropped, it is expected that current economic conditions will cause petroleum consumption in the United States to decline to 19 m/b/d in 2009, a decrease of 420,000 barrels per day (b/d). World oil consumption is, however, expected to rebound in response to an economic recovery. By the end of 2010, world oil demand is projected to increase to 86.6 m/b/d. Historically an oil price spike causes a sharp drop in demand as seen in prior economic slowdowns. When economic growth resumed, however, the growth in oil demand did not return to its prior rate. Permanent changes made in response to higher prices cause increases in efficiency that are sustained. This in turn lowers the rate of growth from levels seen prior to the recessionary period. As a result, demand in 2010 may be lower than anticipated in some forecasts.

For the first quarter of 2009, OPEC's surplus capacity stood at 4.35 m/b/d. This is a sharp increase from the 1.6 m/b/d average for 2008 and is projected to increase further to 4.38 m/b/d by the end of 2009 and 5.35 by the end of 2010. The increase in surplus capacity will create greater price stability since there is a larger supply cushion to off-set production losses that occur due to political instability and hurricanes. These U.S. and world projections are from the EIA's April 14, 2009 "Short-Term Energy Outlook."

World oil prices fell 74 percent in the last half of 2008, as recessionary effects caused oil demand to fall. The world spot price of crude oil has dropped from a high of $137 per barrel in July of 2008 to just under $36 per barrel at the end of December 2008. As of April 17, the world spot price was $50.68 per barrel. Lower demand has caused an increase in stock levels which have reached record highs.

Forecasting the price of crude oil has been difficult in the past several years given factors that included: intense price volatility; supply instability; seasonal changes to blends of gasoline; growth in global demand with only marginal increases in global production; and persistent political instability in the Middle East, Nigeria and Venezuela. This difficulty has recently been greatly exacerbated by the currently depressed U.S. and world economic conditions.

According to analysis in the EIA's April 2009 Short Term Energy Outlook (STEO), even with high oil stocks, prices for crude oil rose in March mainly because of lower production by OPEC members that partially offset reduced oil demand caused by the global economic recession. Timing and pace of the global economic recovery will determine if the higher March prices are sustained. If economic recovery is stronger than expected, prices could be higher than currently projected. Conversely, if the recovery is weaker and more prolonged, this could continue to depress demand and keep prices lower.

U.S. Outlook

Weakness in U.S. economic conditions continues to have an effect on the price and supply of oil nationally. U.S. oil demand has dropped for the last 20 months. According to EIA, total

U.S. liquid fuels consumption is projected to decline by 430,000 b/d in 2009 following a decline of 1.3 m/b/d in 2008. This is expected to recover in 2010 and increase total liquid fuel use by 270,000 b/d or 1.4 percent.

In 2009, U.S. oil production is expected to increase by 440,000 b/d from 2008 levels to an average of 5.4 million b/d. This would be the first increase in production since 1991. The increases in production are from increases in output in the Gulf of Mexico. The Thunder Horse platform is now producing and the Tahiti platform is expected to come on line later in 2009.

Petroleum demand will be supplied from domestic production plus total petroleum net imports of 10.17 m/b/d in 2009. Imports are equal to 53 percent of U.S. oil supplies. Another factor that continues to influence prices is U.S. crude oil inventories. Inventories were 374.7 million barrels on April 24th. This is almost 55 million barrels above levels from a year ago and well above the five-year average for this time of year.

EIA predicts that the price U.S. refiners will pay to acquire crude oil from both domestic production and imports will see an annual average $51 per barrel in 2009 and $61 in 2010. This compares to an average of $95 per barrel for 2008. This figure reflects the average purchase price by refiners, which is different than the price of oil traded on the New York Mercantile Exchange (NYMEX). The NYMEX is more reflective of the spot price, and tends to be higher than the average prices refiners pay for crude oil at refineries.

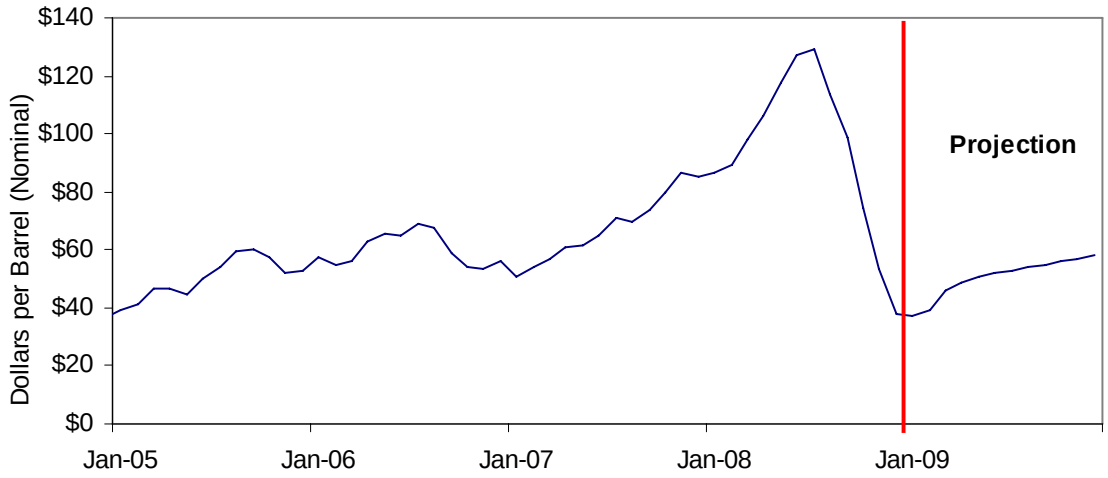
For the week ending April 24, U.S. gasoline inventories were 212.6 million barrels, slightly above the 211.1 million barrels in inventory at this time last year. Gasoline inventories in the U.S. are currently well above the mid-point in the 5-year average range. The capacity utilization rate for U.S. refineries was at 82.7 percent the week ending April 24th, down from a year ago when refineries were operating at 85.4 percent of capacity. Gasoline imports have helped to offset this lower level of refinery production.

It is expected that this year's hurricane season will be less active than in recent years. This translates into lower risk of lost crude oil production from the Gulf of Mexico. Forecasters at Colorado State University released an updated forecast on April 7, 2009 in which they predicted a total of 12 named storms of which six are forecasted to be hurricanes. Of those six hurricanes, only two are predicted to be major hurricanes. Cooler ocean temperatures in the Atlantic Ocean and neutral El Nino/La Nina conditions (referring to sustained sea surface temperature anomalies) in the Pacific Ocean are the main reason for this forecast. In 2008, there were 16 named storms including eight hurricanes, five of them major.

Midwest Outlook

Inventories of crude oil in the Midwest are well above the mid-range of the five-year average for this time of year reaching levels not seen since the 1990s. Gasoline inventories in the Midwest are in the mid-range with almost 51 million barrels in stock at the beginning of March 2009. These are now at 52.2 million barrels by the week ending April 24th and in the middle of the range of levels usually seen this time of year. Distillate inventories - primarily Midwest diesel fuel - are at the middle to high end of the normal range at 33.5 million barrels.

U.S. Refiner Acquisition Cost of Crude Oil



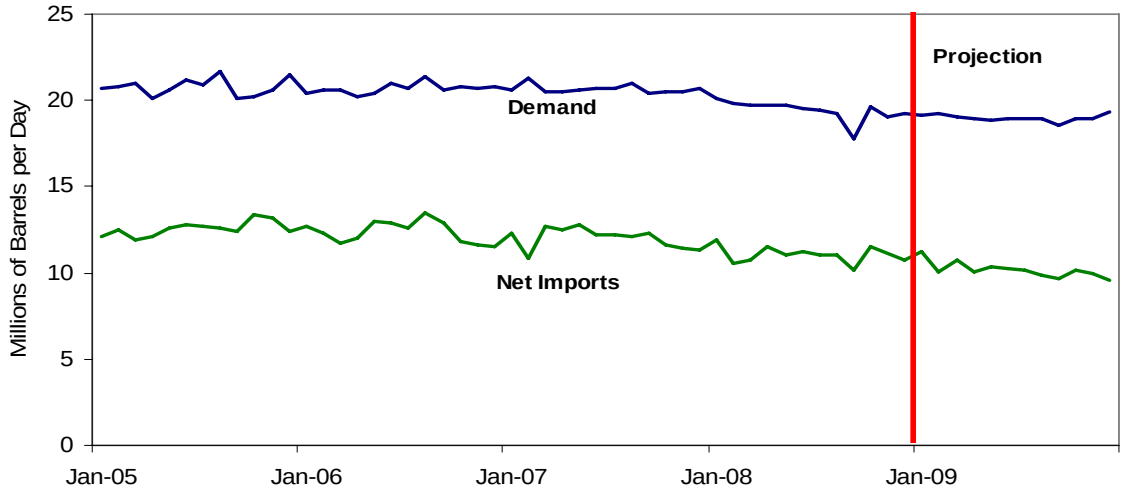
U.S. Petroleum Demand Projections

(Million barrels per day)

	2007		2008				2009				Yearly Average		
	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th	2007	2008	2009
								PROJECTED					
Demand in 50 States	**20.73**	**20.58**	**19.88**	**19.68**	**18.84**	**19.28**	**19.13**	18.90	18.85	19.10	**20.68**	**19.42**	19.00
Domestic Crude Oil Supply [1]	**4.94**	**5.04**	**5.12**	**5.15**	**4.66**	**4.90**	**5.36**	5.45	5.34	5.43	**5.06**	**4.96**	5.40
Total Petroleum Net Imports [2]	**12.23**	**11.47**	**11.05**	**11.25**	**10.73**	**11.14**	**10.68**	10.21	9.91	10.50	**12.04**	**11.04**	10.17
Crude Oil Price $ [3]	**71.37**	**83.97**	**91.17**	**117.20**	**114.89**	**55.19**	**40.87**	50.68	53.98	57.01	**68.13**	**94.68**	50.70

Notes: [1]Includes only crude oil production. Additional sources of domestic petroleum supply include natural gas liquids, other hydrocarbons, alcohol inputs and processing gains. [2]Net Imports include deliveries to the Strategic Petroleum Reserve. [3] In Dollars per barrel for Imported Crude Oil Refiner Acquisition Costs for imports and domestic.
Sources: Energy Information Administration, U.S. Department of Energy, Short-Term Energy Outlook April 2009, and Petroleum Weekly Status Report.

U.S. Total Petroleum Demand and Net imports



Notes: The above projections and analysis were excerpted from the DOE Energy Information Administration's (EIA) "Short-Term Energy Outlook," April 2009, the EIA Weekly Petroleum Status Report, and other industry sources.

Motor Gasoline

Demand

In 2009, gasoline sales in Michigan are expected to decrease 4.1 percent following a decline of 4.5 percent in 2008 and 4.0 percent in 2007. Projected sales for 2009 are 4,114.7 million gallons. In 2009, gasoline use will be down nearly 762 million gallons from 2004, the last year in which Michigan gasoline sales increased. Regionally, gasoline sales are expected to decline, but at a lesser rate of 2.1 percent in 2009 following a reduction of 3.3 percent seen in 2008. High gasoline prices have affected driving across the U.S. as well. According to the Department of Transportation, the number of miles traveled in the U.S. fell by 3.6 percent in 2008 to 2.92 trillion miles from 3.03 trillion miles in 2007. This is a reduction of nearly 108 billion vehicle miles traveled.

Supply

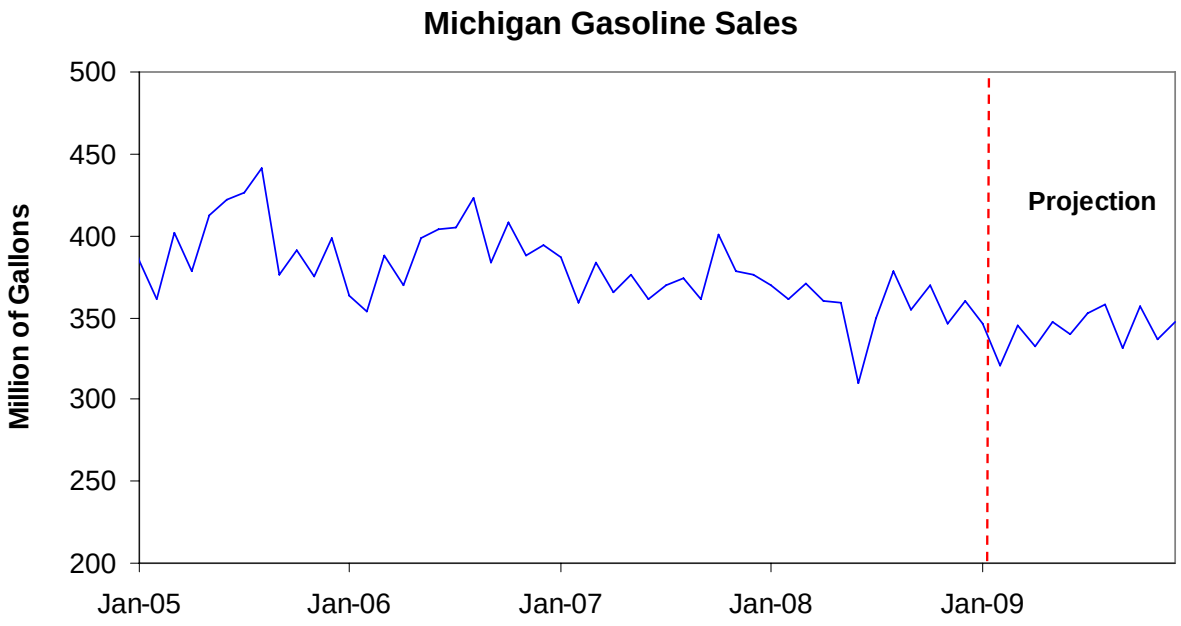
For the week ending April 24th, refineries were operating at 82.7 percent of capacity nationally. This was down from 85.4 percent, seen a year ago at this time. Any demand not met by domestic refinery production is balanced through imports of refined gasoline. For the week ending April 24th, U.S. gasoline imports were 1 million barrels per day, down 92,000 barrels a day from the previous week and down by 52,000 barrels compared to last year at this time. Regional refineries are expected to produce an average of just over 1.5 billion gallons a month in 2009, down 5 percent from 2008 levels.

National gasoline inventories are above the five-year range after having dipped below it in the early fall of 2008 and then risen steadily to the mid-range before spiking above it in early 2009. For the week ending April 24th, U.S. gasoline inventories were 212.6 million barrels, up from the 211.1 million barrels in inventory at this time last year. This is well above the five year average for stocks at this time of year. The current level represents about 23.5 days of U.S. demand, up from 21.3 day a year ago. According to the EIA, Midwest inventories were 52.2 million barrels on the week of April 24th, up from 49.6 million barrels a year ago. Projected regional inventories appear to be within typical levels seen in recent years averaging 546.1 million gallons for 2009 which is equal to about an 11-day supply at projected demand levels. Inventory changes, used to balance refinery production and demand, are a relatively small component of day-to-day supply.

Price

U.S. retail motor gasoline prices have been dropping steadily over the last several months. Last summer, regular unleaded gasoline averaged $3.81 per gallon. EIA projects regular-grade motor gasoline retail prices, which averaged $3.81 per gallon in 2008, to average $2.23 per gallon this year. Prices will fluctuate around this average and EIA has projected a peak national average price of $2.30 per gallon in late summer.

According to AAA, the average price for a gallon of regular unleaded gasoline in Michigan, as of April 29, 2009, was $2.03. This is $1.61 lower than the year ago price of $3.64 and $2.18 below the record high of $4.21 per gallon set on July 17. Twenty-six states are currently reporting prices above the Michigan price with the most expensive gasoline to be found in Alaska at $2.58 per gallon.



Michigan Gasoline Sales Projection

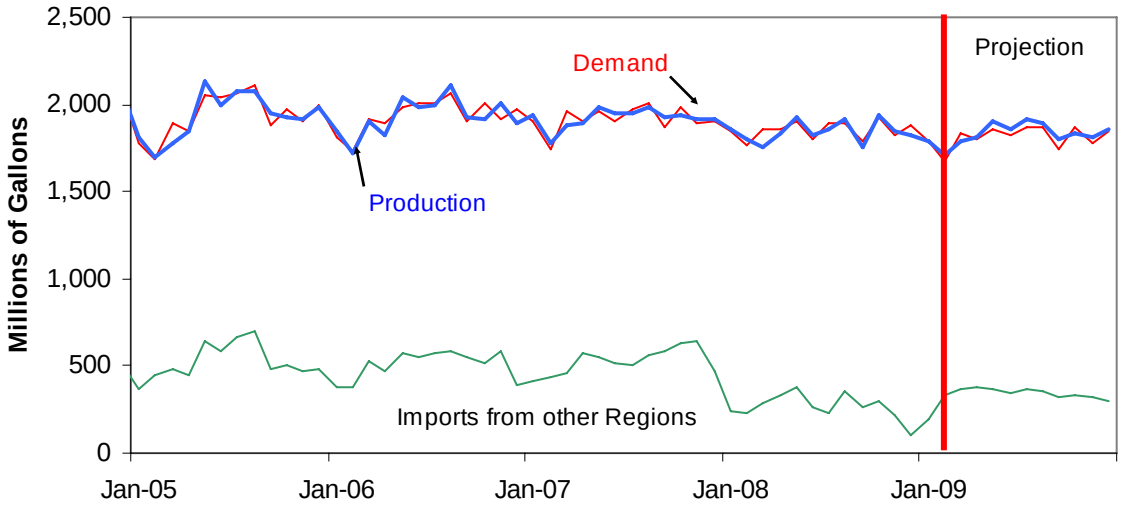
(Millions of Gallons)

			Total All Grades	Historical (prior year)	% Change
Historical	2006	Total	4,678.0	4,769.2	-1.9%
	2007	Total	4,492.0	4,678.0	-4.0%
	2008	Total	4,289.4	4,492.0	-4.5%
	2009	January	346.6	369.4	-6.2%
Projection		February	320.6	361.6	-11.4%
		March	345.1	369.7	-6.7%
		April	332.2	360.0	-7.7%
		May	347.7	359.4	-3.3%
		June	339.4	310.5	9.3%
		July	353.2	349.6	1.0%
		August	357.8	377.8	-5.3%
		September	331.1	355.1	-6.8%
		October	357.4	370.0	-3.4%
		November	336.8	346.2	-2.7%
		December	346.9	360.1	-3.7%
	2009	Total	4,114.7	4,289.4	-4.1%
	2008-09	Change	-4.1%		

NOTE: These projections are based on stable gas prices.

SOURCE: Historical data - Energy Information Administration, U.S. Department of Energy.
Projections – Energy Data & Security Section, MPSC

Regional Gasoline Supply and Demand



Regional Gasoline Supply and Demand

(Millions of Gallons)

			Production		Inventories		Demand	
Historical	2006	Average	1,422.4	r	584.7		1,933.4	r
	2007	Average	1,390.4	r	557.3		1,917.6	r
	2008	Average	1,577.1	r	518.3	r	1,853.7	r
	2009	January	1,585.7		451.7		1,787.8	
Projection		February	1,379.9		487.9		1,676.8	
		March	1,430.4		446.3		1,834.8	
		April	1,432.9		449.6		1,804.7	
		May	1,541.2		495.2		1,858.1	
		June	1,516.2		532.6		1,820.8	
		July	1,544.1		574.6		1,869.1	
		August	1,533.4		591.0		1,873.3	
		September	1,481.1		647.6		1,744.2	
		October	1,498.6		606.0		1,871.1	
		November	1,484.3		632.9		1,782.1	
		December	1,557.4		638.0		1,848.9	
	2009	Average	1,498.8		546.1		1,814.3	
2008-2009 change			-5.0%		5.4%		-2.1%	

NOTES: Production projections are based on refinery utilizations and recent trends.
The region is comprised of Illinois, Indiana, Kentucky, Michigan, Tennessee, and Ohio.
SOURCE: Historical data - Energy Information Administration, U.S. Department of Energy.
Projections –Energy Data & Security Section, MPSC

Gasoline Supply and Demand

(Thousands of Gallons)

		Regional Production	Regional Inventories	Michigan Inventories	Michigan Demand
2004	**Average**	1,496,028	604,748	92,488	406,423
2005	**Average**	1,409,034	595,063	94,504	397,430
2006	**Average**	1,423,870	584,686	92,964	389,830
2007	January	1,545,432	581,490	85,092	382,246
	February	1,340,640	616,224	81,690	358,705
	March	1,424,598	534,156	64,722	383,616
	April	1,320,018	515,088	64,218	365,472
	May	1,429,344	529,494	64,554	376,954
	June	1,446,522	577,248	80,598	361,578
	July	1,445,052	549,948	79,422	369,551
	August	1,426,656	530,208	59,976	373,795
	September	1,349,628	584,682	73,080	360,744
	October	1,311,240	536,844	67,326	400,139
	November	1,271,718	556,794	79,338	377,940
	December	1,440,810	573,132	77,994	376,569
	Average	1,395,972	557,109	73,168	373,942
2008	January	1,620,990	585,270	67,326	369,407
	February	1,569,750	615,384	75,768	361,647
	March	1,460,130	511,896	54,474	369,694
	April	1,510,698	491,148	56,826	359,958
	May	1,551,816	516,348	57,960	359,368
	June	1,559,082	540,288	58,926	349,599
	July	1,624,434	500,388	57,078	349,773
	August	1,559,376	521,808	77,490	377,785
	September	1,483,482	483,546	84,042	355,074
	October	1,638,168	491,190	73,584	370,041
	November	1,624,728	510,846	84,462	346,233
	December	1,722,588	455,406	74,424	360,136
	Average	1,577,104	518,627	68,530	360,726

NOTE: The region includes Illinois, Indiana, Kentucky, Michigan, Tennessee and Ohio
Inventories are month-end.
SOURCE: Energy Information Administration, U.S. Department of Energy

Distillates

Demand

Distillate sales in Michigan in 2009 are projected to continue to decline by an additional 7.7 percent to just over 1.1 billion gallons. Diesel fuel remains the prime component of distillate demand, with the majority being used by trucks on highways. According to the EIA, US distillate fuel demand nationally, including both diesel fuel and heating oil, is projected to be 4.5 percent lower than in 2008, down about 170,000 b/d. The current economic slowdown is the primary cause for the continued decline in demand as fewer good are shipped by trucks and rail. One economic indicator used is the Michigan industrial production index. In the forecast for 2009 by Global Insights, the production index is projected to fall by 14.7 percent this year compared to last.

The news of Chrysler's bankruptcy, along with numerous extended automotive factory closures this summer, will have a large impact on distillate demand, as industry is a primary user of distillate fuels. While not all of the closing factories will be in Michigan, even closures outside of the state will impact Michigan diesel demand as the need for transporting industrial goods has fallen precipitously in the state. Should major auto companies declare bankruptcy, or industrial production fall further than predicted, these will have a downward impact on the current forecast.

Supply

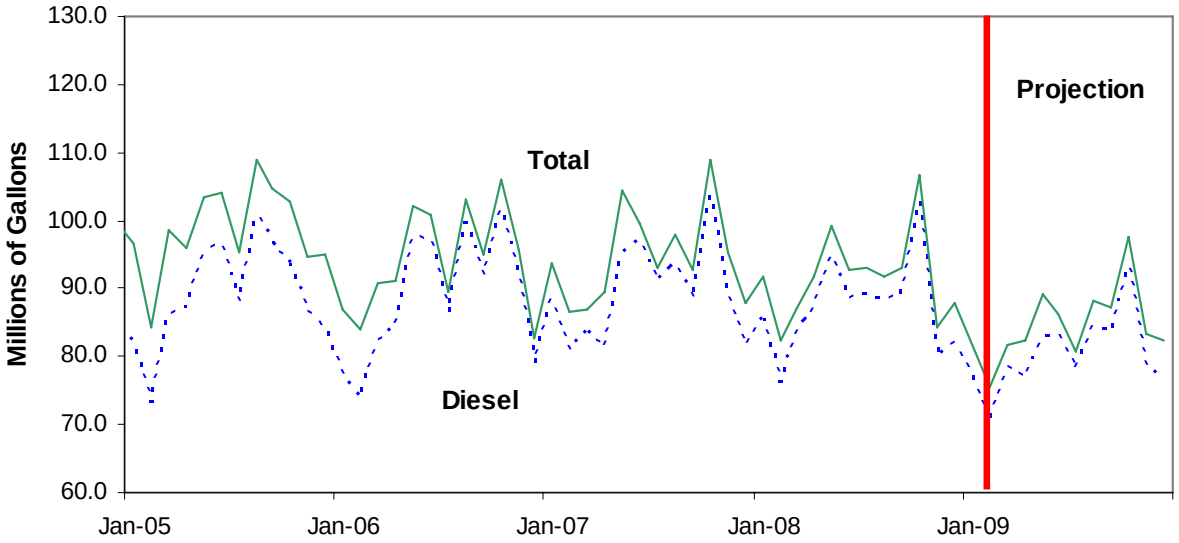
Inventories are substantially above the normal ranges for this time of year. This is true both nationally and regionally. These higher inventory levels will contribute to reduce refinery runs of distillate oil. Regional refineries are expected to produce an average of 688.8 million gallons of distillate fuel oil per month in 2009. This compares to production in 2008 of 750.3 million gallons per month, and 2007 which was 734.9 million gallons per month. On the week ending April 24th, national inventories of distillate oil were 144.1 million barrels, 38.6 million barrels above year ago levels. This puts stocks well above the five-year average range for this time of year. Midwest distillate inventories are above those seen a year ago. Midwest inventories were 33.5 million barrels in the week of April 24th compared to 28.7 million barrels a year ago. Inventory changes, used to balance refinery production and demand, are a small component of the day-to-day supply.

Price

Michigan residential heating oil prices averaged $1.91 per gallon (excluding sales tax) on March 30, 2009. One year earlier, the average price was $3.81. The 2008/2009 heating season began with residential heating oil prices above the level from one year earlier with a price of $3.69 per gallon (Oct. 6, 2008). After rising slightly the following week, prices started a steady drop for the remainder of the heating season.

According to EIA for the week of April 24, diesel fuel prices in the U.S. averaged $2.20 per gallon, down $1.98 from the same time last year. The average Midwest price of $2.14 was lower than the U.S. average. According to AAA, diesel fuel prices in Michigan averaged $2.17 per gallon on April 29, 2009, $2.70 below the $4.87 peak price recorded in Michigan on August 17, 2008 and $2.11 below the $4.28 per gallon price seen a year ago.

Michigan Distillate Fuel Oil Sales



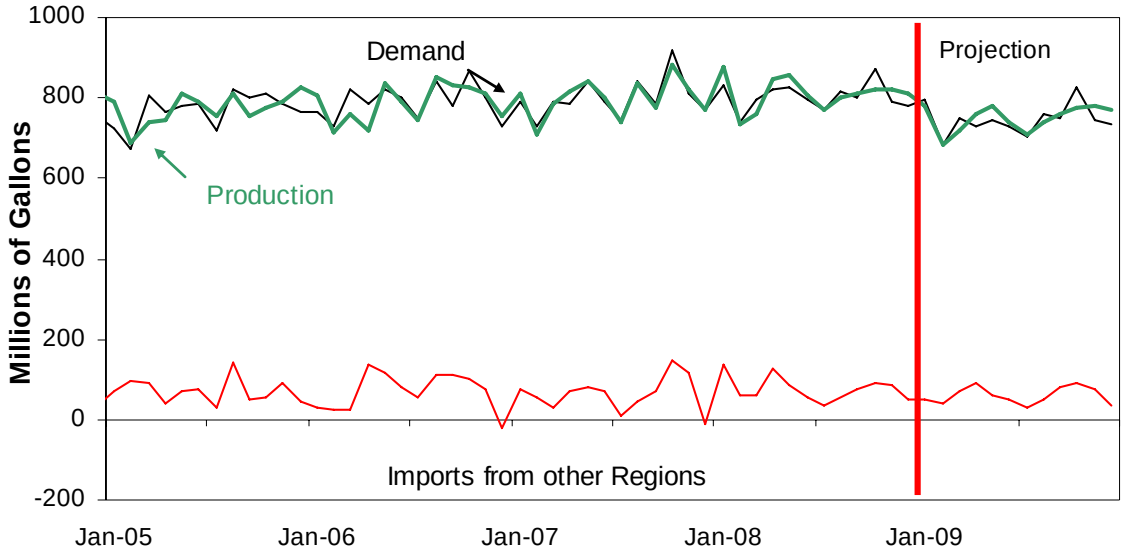
Michigan Distillate Fuel Oil Sales Projection

(Millions of Gallons)

			Other * Distillate	Diesel Fuel	Total	Prior Year	% Change
Historical	2006	Total	62.9	1,064.8	1,127.6	1,184.4	-4.8%
	2007	Total	61.4	1,074.9	1,136.3	1,127.6	0.8%
	2008	Total	54.3	1,046.8	1,101.1	1,136.3	-3.1%
	2009	January	5.0	76.9	81.9	91.8	-10.8%
Projection		February	5.1	70.3	75.4	82.2	-8.3%
		March	3.3	78.6	81.9	87.0	-5.9%
		April	5.7	76.8	82.5	91.6	-10.0%
		May	6.0	83.1	89.1	99.3	-10.2%
		June	2.9	83.2	86.1	92.6	-7.0%
		July	2.5	78.3	80.8	93.0	-13.1%
		August	3.7	84.6	88.2	91.7	-3.7%
		September	3.7	83.6	87.3	93.0	-6.1%
		October	4.2	93.4	97.6	106.8	-8.6%
		November	4.9	78.5	83.4	84.4	-1.1%
		December	5.6	76.7	82.3	87.9	-6.3%
	2009	Total	52.5	964.1	1,016.6	1,101.1	-7.7%

NOTES: These projections assume normal degree day accumulations for the remainder of the year. Actual demand may vary as a result of actual temperature variations. Other distillates were assumed to decline at the same rate as diesel fuel.
SOURCES: Historical data -- Energy Information Administration, U.S. Department of Energy.
PROJECTIONS: Energy Data and Security Section, MPSC
* = Other Distillate is comprised of: Kerosene, No. 1 Distillate and No. 2 Fuel Oil
** EIA has discontinued supplying the data that comprised individual end use demand figures. Due to this change, a different dataset to represent diesel fuel, other uses and total distillate sales is now being used.

Regional Distillate Fuel Oil Supply and Demand



Regional Distillate Fuel Oil Supply and Demand

(Millions of Gallons)

			Production	Inventories	Demand **
Historical	2006	Average	698.1	432.4	791.5
	2007	Average	734.9	454.6	800.0
	2008	Average	750.3	488.7	803.7
	2009	January	729.9	502.3	796.0
Projection		February	642.8	497.9	685.7
		March	646.2	465.2	750.0
		April	666.9	492.6	731.1
		May	716.0	526.8	744.7
		June	689.4	539.2	727.2
		July	681.9	544.6	704.3
		August	690.1	528.2	758.0
		September	679.7	538.5	749.0
		October	684.1	488.9	824.5
		November	703.0	525.2	744.9
		December	735.5	563.2	734.5
	2009	Average	688.8	517.7	745.8

NOTES: Production projections based on expected refinery capacity utilization and recent trends. Regional demand estimates are based on the recent regional trend. The region is comprised of Illinois, Indiana, Kentucky, Michigan, Tennessee, and Ohio.
SOURCES: Historical data -- Energy Information Administration, U.S. Department of Energy;
PROJECTIONS: Energy Data & Security Section, MPSC.
** EIA has discontinued supplying the data that comprised individual end use demand figures. Due to this change, a different dataset to represent diesel fuel, other uses and total distillate sales is now being used.

Distillate Fuel Oil Supply and Demand

(Thousands of Gallons)

		Regional Production	Regional Inventories	Michigan Inventories	Deliveries to Michigan**		
					Other*	Diesel	Total
2004	Average	666,085	436,356	47,152	13,544	84,493	98,037
2005	Average	703,003	434,340	46,848	9,466	89,232	98,698
2006	Average	716,993	432,418	43,131	5,238	88,730	93,968
2007	January	737,856	462,588	43,932	4,966	88,623	93,589
	February	652,512	439,572	46,200	5,401	81,197	86,598
	March	754,110	433,986	38,640	3,227	83,647	86,874
	April	747,054	466,704	45,234	8,103	81,426	89,529
	May	763,476	467,460	38,220	9,626	94,894	104,520
	June	730,254	477,288	41,412	2,289	97,155	99,444
	July	740,502	474,516	38,850	1,776	91,156	92,932
	August	788,550	470,652	45,990	4,352	93,639	97,991
	September	707,658	462,378	40,152	4,050	88,533	92,583
	October	734,496	424,620	40,278	5,127	103,893	109,021
	November	706,356	435,960	53,718	6,243	88,977	95,220
	December	782,544	439,992	56,784	6,240	81,753	87,994
	Average	737,114	454,643	44,118	5,117	89,574	94,691
2008	January	742,812	488,082	43,134	6,265	85,538	91,803
	February	674,688	483,210	46,494	6,023	76,188	82,211
	March	573,972	444,234	43,932	15,925	71,077	87,002
	April	734,958	419,874	48,384	4,290	87,315	91,605
	May	825,846	450,030	53,298	4,241	95,034	99,274
	June	799,470	445,410	46,830	4,119	88,461	92,580
	July	789,222	426,678	47,838	3,900	89,057	92,957
	August	800,940	476,238	49,434	3,540	88,124	91,664
	September	701,904	480,018	54,264	3,867	89,127	92,994
	October	769,608	415,170	47,796	4,197	102,629	106,826
	November	794,766	463,302	55,776	4,395	79,968	84,363
	December	795,144	490,854	52,038	5,701	82,159	87,860
	Average	750,278	456,925	49,102	5,539	86,223	91,762

NOTES: The region includes Illinois, Indiana, Kentucky, Michigan, Tennessee, and Ohio. Inventory and production data include all distillate categories.
SOURCES: Energy Information Administration, U.S. Department of Energy.
* = Other Distillate is comprised of: Kerosene, No. 1 Distillate and No. 2 Fuel Oil
** EIA has discontinued supplying the data that comprised individual end use demand figures. Due to this change, a different dataset to represent diesel fuel, other uses and total distillate sales is now being used.

Energy Provisions of the American Recovery & Reinvestment Act of 2009

On February 17, 2009, the President signed the American Recovery and Reinvestment Act of 2009 (ARRA) into law. The ARRA, also called the stimulus package, is intended to help stimulate the U.S. economy in the wake of the economic recession. Included in the ARRA's many provisions are several that deal specifically with the energy sector including loans, tax credits, and investments in renewable energy and energy efficiency technology. Of the Act's many specific energy provisions, some initiatives will provide funding to the State of Michigan. Following is a brief summary of some of these key programs.

State Energy Program (SEP) is administered by the DOE's Office of Energy Efficiency and Renewable Energy and provides grants and direct funding to state energy offices for education, outreach, and demonstration programs. States use the program to address their energy priorities, such as adopting renewable energy and energy efficiency technologies.

The goals established for the SEP are:

- Increase energy efficiency to reduce energy costs and consumption for consumers, businesses, and government;
- Reduce reliance on imported energy;
- Improve the reliability of electricity and fuel supply and the delivery of energy services; and,
- Reduce the impacts of energy production and use on the environment.

In Michigan, the Bureau of Energy Systems in the Department of Energy, Labor & Economic Growth promotes energy efficiency and renewable energy resource development to Michigan's residents, businesses and public institutions. In 2008, Michigan received $1.7 million to fund the SEP. Under the ARRA, Michigan will receive $82 million for efforts supported under this program.

Energy Efficiency Conservation Block Grant Program will provide Michigan with a total of $76.6 million, most of which will be distributed in direct grants from the U.S. Department of Energy to larger cities and counties. This funding can be used to support activities such as: energy audits and energy efficiency retrofits in residential and commercial buildings, the development and implementation of advanced building codes and inspections, and the creation of financial incentive programs for energy efficiency improvements. Other activities eligible for use of grant funds include transportation programs that conserve energy, projects to reduce and capture greenhouse gas emissions, renewable energy installations on government buildings, energy efficient traffic signals and street lights, deployment of Combined Heat and Power and district heating and cooling systems, and others.

Weatherization Assistance Program (WAP) was created in 1976 to assist low-income families who lacked resources to invest in energy efficiency. WAP is operated in all 50 states, the District of Columbia, Native American tribes, and anticipates beginning service to U.S. Territories in FY 2009. Funds are used to improve the energy efficiency

of low-income homes. The energy conservation resulting from the efforts of the WAP program helps reduce U.S. dependence on foreign oil and decrease the cost of energy for families in need while improving the health and safety of their homes. In Michigan, the funding for the WAP is administered by the Michigan Department of Human Services. In 2008, Michigan received funding from the DOE for the WAP that totaled $15 million. Under the ARRA, Michigan will be receiving $243 million.

Smart Grid Investment Grant Program will fund efforts to modernize the nation's electric utility grid to deliver electricity from suppliers to consumers using digital technology to save energy, reduce cost and increase reliability. This Smart Grid concept is being promoted by government and many utilities as being a way of addressing energy independence and climate change issues. Under the ARRA, $4.5 billion is earmarked for funding the Smart Grid nationally. Of that, $100 million is for worker training, $80 million is for DOE transmission and demand analysis and assistance, and $10 million is to fund Smart Grid system interoperability and integration. The amount of funding to be received by Michigan will depend largely on the success of private sector applications to obtain funding under the 50/50 matching grant program.

Feedback Welcome:

The Michigan Energy Appraisal is available at no cost to people interested in energy supply and demand trends. If you have comments or suggestions for additional information and analysis that you would like to see included, send them to the address below. Please use this form (with mailing label intact on reverse side) to request address or name changes, or to be added to our mailing list. Please check appropriate box below:

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[ ] Please make the following address corrections:

Name_____ Email_____

Organization_____

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