Semiannual Projections
Energy Supply and Demand
Winter Outlook 2007 - 2008

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

Michigan Department of Labor & Economic Growth
Public Service Commission
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Preface

The Michigan Energy Appraisal is a semiannual assessment of energy markets. The assessment assists in identifying potential supply problems, including adequacy of supply, weaknesses in the distribution system and energy price changes. The focus of this report is on current events impacting supply, prices and expected conditions and changes over the next six months.

The scope of the analysis varies by energy source. Petroleum product markets in Michigan are affected by international market conditions and events, and regional refinery production. Michigan's electricity prices, supply and availability are largely determined by events in Michigan and the Midwest. Natural gas supplies and prices are more closely tied to North American markets. 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 concerns regarding summer energy use, including peak electricity supply and demand and gasoline for the summer driving season.

This report is prepared by the Motor Carrier, Energy Grants and Information Division, Regulated Energy Division, and the Operations & Wholesale Markets Division of the Michigan Public Service Commission (MPSC), Department of Labor and 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.

If you would like to be placed on the mailing list to receive future semiannual Energy Appraisal issues, please complete and return the form on the inside of the back cover. Comments or questions on this appraisal are welcome and may be directed to Jeffrey Pillon, Michigan Public Service Commission, P.O. Box 30221, Lansing, Michigan 48909, phone (517) 241-6171, fax (517) 241-6031, or e-mail pillonj@michigan.gov.

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Summary

Energy Appraisal – Winter 2007 - 2008

The outlook this winter shows that energy supplies in Michigan will be adequate to meet anticipated demand, but at prices that will be higher. Residential natural gas prices are currently 2 percent higher than last winter. Residential #2 heating oil prices are up sharply due to increases in crude oil prices that have affected the price of all petroleum products. As of October 8, 2007, the average price of residential #2 heating oil is up 20 percent from last winter's average and residential propane prices are up by 8 percent.

Winter weather that is either colder or warmer than last year will affect actual monthly usage and bills. The National Weather Service is projecting that the temperatures in the Great Lakes region will be warmer than normal from October 2007 through March 2008. This would continue a trend seen over the last six heating seasons in Michigan where heating degree days have averaged 5 percent warmer than normal. This in turn would mean somewhat lower heating bills than estimates based on normal temperatures.

Electricity – Michigan electricity sales for 2007 are projected to increase by 1.5 percent compared to 2006. This compares to a calendar year 2006 decrease of 0.8 percent over 2005. This year's summer temperatures were not as hot as 2006, which reduced air conditioning use and lowered the overall sales figure for 2007. The outlook for this winter shows no supply shortages or transmission constraints that would impact the ability of Michigan utilities to meet winter peak electric demand.

Natural Gas – For the 2007-2008 winter heating season, assuming normal weather, a typical Michigan resident can expect their winter bill over the November to March period to be around $764, based on October 2007 prices. This represents a 2 percent increase in residential prices, plus a 6 percent increase in usage assuming normal winter temperatures. The combination of higher prices and increased usage could cause natural gas bills to rise by 8 percent this year compared to last winter.

Total annual natural gas sales in Michigan for 2007 are projected to be 836 billion cubic feet (Bcf), almost 9 percent greater than the 2006 total, but still 4.5 and 5.9 percent lower than 2005 and 2004 levels, respectively. Natural gas storage levels are normally built up during the summer months and are projected to be at 618.2 Bcf in October 2007, about 96.5 percent of total capacity, which should be sufficient to meet anticipated demand for the coming winter.

Petroleum – Despite continued higher crude oil prices, world oil demand continues to see growth. During the fourth quarter of 2007, the Energy Information Administration (EIA) projects that world oil consumption will increase 1.8 million barrels per day (b/d). Total world oil demand is projected to rise from 85.5 million b/d in 2006, to 87.5 in 2007, and 88.4 in 2008. These increases in demand, coupled with moderate growth in production, leave the market vulnerable to continued price uncertainty and potential supply disruptions. As seen in recent years, severe weather activity along the Gulf Coast, security concerns in the Middle East and pipeline disruptions, can all have a dramatic affect on crude oil prices and petroleum supplies.

In 2007, the cost of crude oil to U.S. refiners is projected to be $65.64 per barrel compared to the $60.08 per barrel average in 2006. The projected cost for 2008 is $70 per barrel.

Motor Gasoline – Gasoline prices in Michigan reached a new record high on May 26, 2007 when AAA Michigan reported an average price of $3.53 per gallon, topping the previous record high on August 2, 2006 of $3.09 per gallon. Prices have retreated from these record levels and according to AAA as of October 9, 2007, the average Detroit area retail gasoline price was $2.86 per gallon, 67 cents below the record high. For 2007, gasoline sales in Michigan are projected to show a continued decline, decreasing 1 percent from 2006. Projected sales for 2007 are 4,633 million gallons, down from 4,678 million gallons in 2006. This is the third consecutive year of declining gasoline sales in Michigan.

Distillate Fuel Oil – For 2007, distillate deliveries are projected to increase by 3.6 percent to 1.13 billion gallons. The three principal factors affecting distillate usage in Michigan are industrial production, winter weather, and price. The average residential price in Michigan for home heating oil on October 8, 2007 was $2.84 per gallon, up 57 cents per gallon from year ago levels and 36 cents since March 2007.

October 10, 2007
Michigan Public Service Commission
Department of Labor & Economic Growth

Electricity

Demand

Michigan's electricity sales are expected to increase by 1.5 percent in 2007, reversing the small decline seen in 2006. This is largely due to an increase in industrial and residential demand for electricity, while commercial demand has declined very slightly. Overall, Michigan's summer weather of 2007 was warmer than normal, but not as warm as the last two years, and power demand in Michigan remained within the limits of the available supply. The Detroit cooling degree days[1] for January 1 to August 31, 2007 were 797 versus a normal of 655 for this time of year. This represents a 22 percent increase over normal, resulting in greater demand for electricity due to cooling requirements.

Consumers Energy's highest total electric demand this summer, including choice customers, was 8,454 megawatts (MW) which occurred on August 1, 2007. This was still below last year's all-time high of 8,994 MW recorded on August 1, 2006. Detroit Edison's peak demand this year, including choice customers, was12,313 MW occurring on August 2, 2007, also below the previous all-time high of 12,778 MW set on August 2, 2006. Combined, the 2007 peak load for both utilities of 20,767 MW was about 1,000 MW lower than the 21,772 MW peak seen in 2006.

MPSC Case No.U-15163, which Consumers Energy filed on April 13, 2007, showed a total planned capacity for the summer of 2007 of 9,383 MW versus a firm projected peak load demand of 8,453 MW. The estimated reserve margin for Consumers is 11 percent. Also, on April 13, 2007 for the summer 2007 load, Detroit Edison filed a total planned capacity of 13,170 MW versus a firm projected peak load demand of 11,432 MW. The planned reserve margin for Edison is 15 percent.

Typically, load management is projected to be used on average, 5-6 times a year. Detroit Edison can cycle interruptible residential air conditioning customers and Consumers Energy can purchase back capacity from large customers to reduce system loads if needed. Detroit Edison did not interrupt any of its large interruptible customers this past summer, although both utilities did issue public appeals for reduced electric usage and Detroit Edison did cycle their interruptible residential air conditioning customers on the peak day.

[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.

Supply

No supply shortages or transmission constraints are expected to impact the ability of Michigan utilities to meet winter peak electric demand, which is normally at least 25 percent lower than the summer peak demand. In addition to power that they generate, Michigan utilities can purchase external electricity supply from the Midwest Independent System Operator (MISO), as may be required.

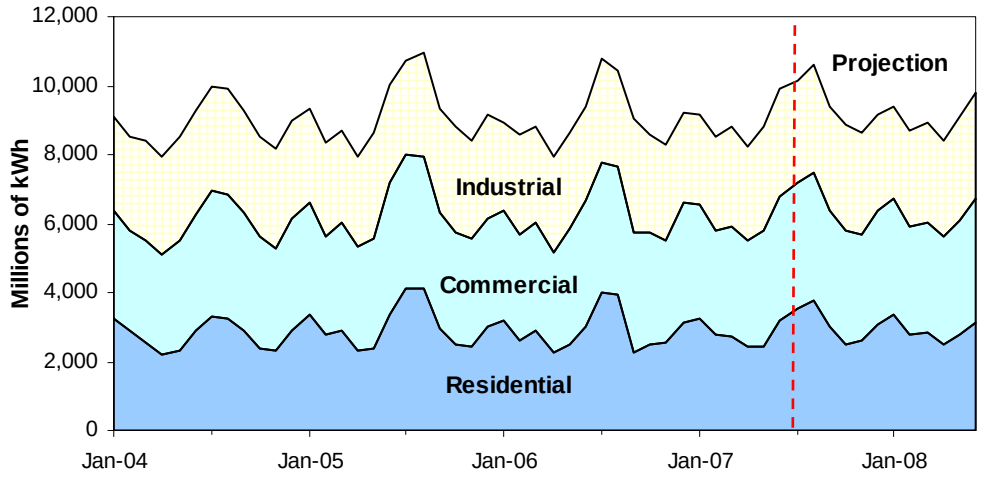
Prices

A Consumers Energy residential customer using 500 kWh per month pays $48.44 (9.69 cents per kWh) as of October 1, 2007. A Detroit Edison residential customer using 500 kWh per month pays $51.84 (10.37 cents per kWh) as of October 1, 2007. These prices include additional billing charges associated with energy delivery.

It is possible that residential customers of Detroit Edison and Consumers Energy may see their monthly bills increase based on rate case and Power Supply Cost Recovery filings made this year. Consumers and Edison have both filed for rate increases which are pending MPSC action. Consumers' request, if granted, would increase a residential bill for 500 kWh by 9.5 percent. For Edison, the pending request, if granted, would result in an increase of 6.4 percent.

In addition, both companies, on September 30, 2007, filed Power Supply Cost Recovery (PSCR) cases for 2008 at the Commission. PSCR charges represents a cost recovery by a utility for the increases or decreases in the cost of fuel and purchased power. Edison is asking for a PSCR charge of 0.00923 cents per kWh and Consumers requested a PSCR charge of 0.02165 cents per kWh. Consumers' requested charge is greater than Edison's because it includes the cost of power purchased from the Palisades Nuclear facility that Consumers sold in 2006 and the under recovery from 2006.

Michigan Electricity Sales



Michigan Electricity Sales Projection
(Millions of kWh)

			Residential	Commercial	Industrial	Total
Historical	2004	Total	33,104	38,632	34,867	106,603
	2005	Total	36,141 r	39,852 r	34,399 r	110,392
	2006	Total	34,756 r	40,125 r	33,764 r	108,645
	2007	January	3,235	3,302	2,617	9,154
		February	2,786	2,992	2,767	8,545
		March	2,740	3,146	2,927	8,813
		April	2,449	3,052	2,712	8,213
		May	2,457	3,330	3,008	8,795
Projection		June	3,189	3,621	3,087	9,897
		July	3,564	3,613	2,995	10,172
		August	3,743	3,756	3,113	10,611
		September	3,027	3,348	3,033	9,409
		October	2,506	3,283	3,080	8,868
		November	2,583	3,126	2,927	8,637
		December	3,091	3,270	2,819	9,180
	2007	Total	35,369	39,840	35,085	110,294
	2006-2007 change		1.8%	-0.7%	3.9%	1.5%
	2008	January	3,370	3,350	2,676	9,396
		February	2,790	3,103	2,778	8,672
		March	2,830	3,201	2,918	8,949
		April	2,488	3,112	2,827	8,428
		May	2,791	3,295	3,007	9,093
		June	3,144	3,586	3,079	9,809

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 Section, MPSC., r = revised

Demand

Total natural gas sales in Michigan for 2007 are projected to be 836 billion cubic feet (Bcf), almost 9 percent greater than 2006, but still 4.5 and 5.9 percent lower than 2005 and 2004 levels, respectively. For the first six months of 2007, natural gas demand was 8.6 percent higher than the previous year, due largely to the cold weather seen during the first part of this year compared to warmer than normal weather seen during the first half of 2006.

Supply

Nationally, working gas in underground storage was 3,263 Bcf as of September 28, 2007. This is 7.5 percent above the 5-year average inventory level for this time of year. Natural gas production in Michigan is projected to decline by 6.8 percent from 174.1 Bcf in 2006 to 162.2 Bcf in 2007, marking the tenth consecutive year of decline. This downward production trend is expected to continue into the foreseeable future, as the existing wells have reached maturity and the production from new wells is not sufficient to offset this decline. With declining Michigan production and increasing demand, net interstate deliveries are projected to be 618.6 Bcf in 2007. Natural gas storage levels are normally built up during the summer months and are projected to be at 618.2 Bcf in October 2007, about 96.5 percent of Michigan's storage capacity. This should be sufficient to meet anticipated demand for the coming winter.

Price

The warmer than normal winter last year left more gas in storage at the end of winter; therefore less gas was required to be added to storage during the April and October injection season. The relatively high inventories have helped to keep natural gas prices lower than expected. In addition, this year's hurricane season has been less active than expected which has kept summer wholesale gas prices around $6.80 per thousand cubic feet. That will help moderate the possible natural gas price increase projected for this winter.

Assuming a return to normal weather, residential natural gas bills will be up this winter compared to last. Currently, the wholesale natural gas prices the utilities pay to purchase natural gas for November 2007 through March 2008 are at approximately $7.61 per thousand cubic feet, 0.6 percent higher than last winter's average. Because last winter was 5.6 percent warmer than normal, a return to normal weather would increase use, causing an increase in monthly bills. However, the National Weather Service is projecting that the temperatures in the Great Lakes region will be warmer than normal from October 2007 though March 2008. This would continue a trend seen over the last six heating seasons in Michigan where heating degree days[2] have

[2] **Heating degree-days (HDD):** A measure of how cold 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 average of the day's high and low temperatures from the base temperature (65 degrees), with negative values set equal to zero. Each day's heating degree-days are summed to create a heating degree-day measure for a specified reference period. Heating degree-days are used in energy analysis as an indicator of space heating energy requirements or use. Source: Energy Information Administration.

averaged 5 percent warmer than normal. This in turn would mean somewhat lower heating bills than estimates based on normal temperatures.

For the 2007-2008 winter heating season, assuming normal weather, a typical Michigan resident can expect their winter bill over the November to March period to be around $764 based on October 2007 prices. This represents a 2 percent increase in residential prices, plus a 6 percent increase in usage assuming normal winter temperatures. The combination of higher prices and increased usage could cause natural gas bills to rise by 8 percent this year compared to last winter. Actual winter bills were lower than expected last winter due to temperatures that were warmer than normal.

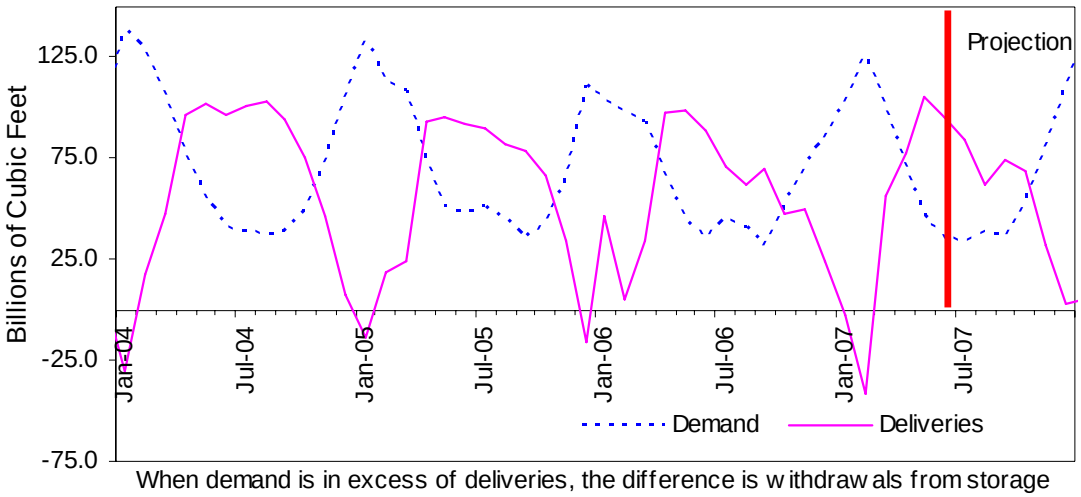
A breakdown for residential prices for Michigan's major gas utilities are shown in the following table. These prices include the wholesale cost of gas purchased by Michigan utilities, the cost of distributing the gas to customers on the company's pipeline system and the monthly customer charge. The cost of gas over the winter months will vary to some extent driven by supply demand conditions. The purchased gas cost component is fully reconciled in the spring to reflect the actual cost of the gas purchased by the utility for its customers.

Residential Natural Gas Prices

($ per 1,000 Cubic Feet)

	2006 – 2007 Average	October 2007	% Change
Consumers Energy	$10.10	$10.38	3%
MichCon	$9.43	$9.77	4%
SEMCO	$10.17	$10.10	-0.7%

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	2004	Total	888.8 r	760.4 r	190.1 r	60.0	485.6
	2005	Total	875.4 r	654.7 r	180.0 r	-40.7	444.9
	2006	Total	768.6 r	694.9 r	174.1 r	100.7	545.6
	2007	January	102.3	-2.4	14.3	-90.4	455.1
		February	127.1	-41.3	12.5	-155.8	299.4
		March	100.1	56.4	14.2	-29.4	269.9
		April	71.3	76.9	13.7	19.3	289.2
		May	46.4	105.5	14.1	73.2	362.4
		June	35.3	95.7	13.2	73.6	436.0
Projection		July	34.5	85.1	13.5	64.1	500.2
		August	38.1	63.3	13.5	38.7	538.9
		September	36.7	74.8	12.9	51.0	589.9
		October	53.6	68.3	13.6	28.3	618.2
		November	79.3	32.3	13.2	-33.8	584.4
		December	111.3	3.7	13.5	-94.0	490.4
	2007	Total	836.0	618.6	162.2	-55.2	490.4
	2006-2007 change		8.8%	-11.0%	-6.8%		-10.1%
	2008	January	132.4	5.0	13.4	-114.0	376.4
		February	123.4	23.9	11.8	-87.7	288.7
		March	110.5	38.6	13.3	-58.6	230.1
		April	82.2	88.4	12.9	19.0	249.2
		May	56.7	99.8	13.3	56.4	305.6
		June	41.9	95.9	12.4	66.3	371.9

NOTES: Projected demand assumes normal weather for the remainder of the year. The Michigan production series is compiled by the Energy Operations Division, MPSC. Net interstate deliveries are calculated using sales 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; Production from Energy Operations Division, MPSC. r = revised data; Projection –Energy Data and Security Section, MPSC.

World Outlook

The EIA's October 2007, "Short-Term Energy Outlook" projects that world oil consumption will increase 1.8 million barrels per day (b/d) during the fourth-quarter of 2007. This follows a rise of 1.2 million b/d in the second quarter of 2007 and brings projected world oil demand from 85.5 million b/d in 2006, to 87.5 in 2007, and 88.4 in 2008. The United States, China and India account for most of the increases in world oil demand.

On September 11, 2007, OPEC agreed to increase its oil output by 500,000 barrels per day starting November 1, 2007. This means most members will continue to produce at or near capacity. Non-OPEC production is projected to increase by 600,000 b/d in 2007 and by another 860,000 b/d in 2008. These increases will contribute to meeting the growth in world oil demand; however increased world demand, coupled with only moderate growth in production, leaves the market vulnerable to continued price instability and potential supply disruptions.

Increases in oil production capacity are expected to push total world spare production capacity to just over 2 million b/d per day in 2007 and into the 2 to 3 million b/d range in 2008. Most of this spare capacity is concentrated in Saudi Arabia. The average range between 1996 and 2006 was 2.8 million b/d although in 2005 this fell to 1 million b/d. With little spare capacity in 2005, the unexpected loss of any significant world production would have had a far more dramatic impact on prices than would occur when this cushion is larger. This increased price volatility resulted in traders paying higher prices than the market conditions might have otherwise warranted as a risk premium. The expected increases in spare capacity should help dampen some of the price volatility seen in recent years if it comes on line as expected.

In recent weeks crude oil has traded above $80 per barrel in the New York Mercantile Exchange (NYMEX). A number of oil analysts believe these prices cannot be sustained given the current oil market fundamentals affecting supply and demand. Even some OPEC members have said the market can not support prices above the $80 mark for long. The EIA has projected that crude oil prices will fall into the low $70's range and remain near this level through mid next year. Based on this, the market should see a correction in the near term that will push crude oil prices down from their current levels which will translate into lower petroleum product prices.

U.S. Outlook

According to the EIA Short Term Energy Outlook, total U.S. petroleum consumption is projected to grow 0.5 percent in 2007, reaching an average of 20.8 million b/d. This growth is expected to continue into 2008, with an increase of 1 percent, resulting in an average of 21 million b/d.

Domestic crude oil production is expected to average 5.1 million b/d, up 0.7 percent from 2006 levels. For 2008, a 2.3 percent increase to 5.3 million b/d is expected due to new domestic production coming online in late 2007 and 2008. Petroleum demand will be supplied from domestic production plus imports of crude oil and petroleum products of 12.14 m/b/d in 2007, and 11.75 in 2008. In 2007, imports are projected to supply 58 percent of U.S. petroleum needs.

U.S. crude oil inventories were 321.8 million barrels on September 28, 2007, about 2 percent lower than a year ago and just slightly above the five-year average for this time of year. Other petroleum product inventories are not faring as well. Current gasoline inventories are well below the five year average and distillates supplies are in the upper mid-range. Refineries have been running at a capacity utilization rate of approximately 89 percent in 2007. As gasoline imports from Europe have remained stable over the same time period, this has caused tightness in supply that has helped keep gasoline prices high.

In 2007, the cost of crude oil to U.S. refiners is projected to be $65.64 per barrel compared to the $60.08 per barrel average in 2006. The projected cost for 2008 is $70 per barrel. These figures reflect the average purchase price, which is different than the price of oil traded in the New York Mercantile Exchange (NYMEX). The NYMEX is more reflective of the spot price, and tends to be higher than the average purchase price.

Midwest Outlook

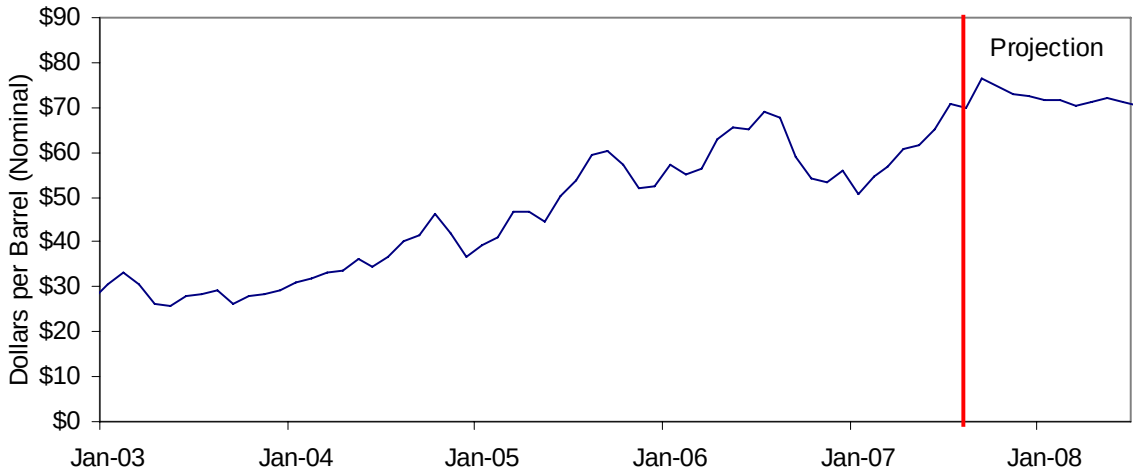
Supplies of gasoline in the Midwest were affected this summer by unexpected shutdowns at two of the region's refineries. In late March and early April, the BP refinery at Whiting, Indiana was partially shutdown as a result of fire. The Whiting refinery, the largest refinery in the Midwest at 420,000 b/d had its capacity cut to around 200,000 b/d. Then, in April, a loss of steam power caused BP to shut down its 160,000 bpd Toledo, Ohio refinery, which resulted in the loss of half of its production until about mid-May. The effect of these problems was magnified as they occurred at a time of low inventories in the region and resulted in wholesale and refined gasoline price increases. In July another problem at the Whiting refinery caused a further temporary reduction in refinery production causing a second run up in gasoline prices in mid-July.

Since that time, however, both of the BP refineries have returned to full production and there has been a rebuilding of inventories in the region. Inventories of crude oil in the Midwest are now above the five-year average for this time of year. Since May, gasoline inventories plunged well below five year averages, but began rebounding in August and continue to climb. The end of the summer driving season, and the change over to the winter grade gasoline specifications on September 15, should help continue this trend. Distillate oil inventories continue to need watching. In May, June, and July of this year, the monthly data showed inventories just below the average range and only the more recent weekly data shows a recovery moving to the low end of the five-year average.

Because of the high usage of propane for residential heating in Michigan, it is of note that the EIA, on September 28, 2007 reported that inventories of propane were approximately 59.1 million barrels, about 11 million barrels below the same week last year. Some analysts believe that stocks need to be at least 60 million barrels prior to the start of the heating season to provide a minimum level of immediate supply to meet normal demand over the winter. Additionally, when propane inventories are at the upper limits of the average range, the extra inventory acts as a safety net and buffers the price over the length of the heating season.

Refiner Acquisition Cost of Crude Oil

2003 through August 2007 with projections through June 2008



U.S. Petroleum Demand Projections

(Million barrels per day)

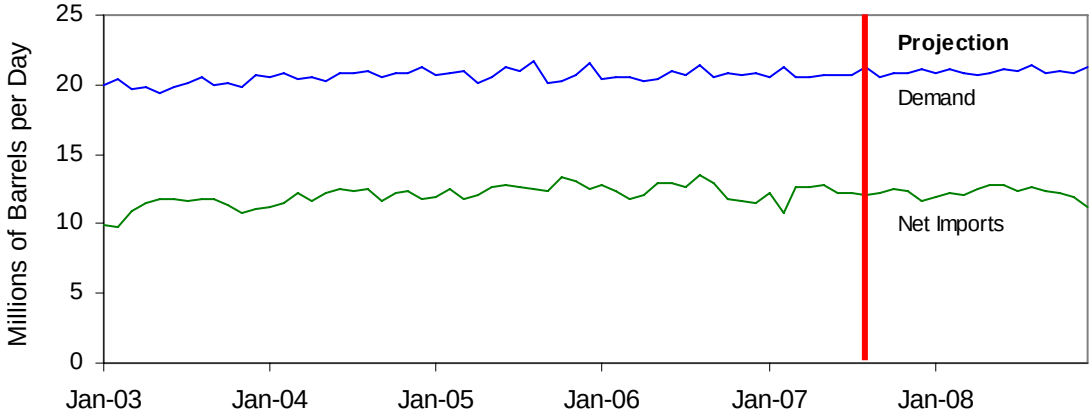
	2006				2007				2008		Yearly Ave		
	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	2006	2007	2008
							PROJECTED		PROJECTED				
Demand in 50 States	20.54	20.55	20.91	20.74	20.78	20.65	20.80	20.91	20.96	20.85	20.69	20.78	20.99
Domestic Crude Oil Supply [1]	5.00	5.10	5.14	5.17	5.17	5.20	5.05	5.14	5.28	5.24	5.10	5.14	5.26
Total Petroleum Net Imports [2]	12.25	12.64	13.03	11.67	11.85	12.52	12.16	12.14	12.08	12.71	12.40	12.17	12.26
Crude Oil Price [3]	56.18	64.50	65.09	54.53	53.99	62.45	72.37	73.33	71.17	71.33	60.08	65.54	70.00

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

Sources: Energy Information Administration, U.S. Department of Energy, Short-Term Energy Outlook October 2007, and Petroleum Supply Monthly.

U.S. Total Petroleum Demand and Net imports

2003 through August 2007 with projections through 2008



Notes: The above projections and analysis were excerpted from the DOE Energy Information Administration's (EIA) "Short-Term Energy Outlook," October 2007, the EIA Weekly Petroleum Status Report, Monthly Energy Review, and other industry sources.

Motor Gasoline

Demand

For 2007, gasoline sales in Michigan are projected to decline 1 percent from 2006. This marks the third straight year of declining gasoline sales. Projected sales for 2007 are 4,632.9 million gallons, down from 4,678.0 million gallons in 2006. This is a reversal from the projected 1 percent increase for 2007 shown in the Summer Appraisal. Although gasoline sales in Michigan held steady to the projected increase through April, when gas prices experienced a dramatic increase in May of 2007, sales began to decline. Higher than expected prices lasted for most of the summer as the price of crude oil continued an upward growth trend starting in January 2007, and the Midwest experienced tightened refined gasoline supplies due to regional refinery problems. Regionally, gasoline sales have not been depressed to the same degree as seen in Michigan with demand projected to increase by 0.6 percent in 2007.

Supply

Since the end of June, U. S. refineries have been operating at an average rate of 91.4 percent of capacity, although as of September 28, 2007, this rate has dropped to 87.5 percent. Any regional demand not met by domestic refinery production is balanced through imports of refined gasoline from other regions in the U.S. and foreign imports. Imports of refined gasoline into the U.S. from overseas since the end of June have averaged 1.2 million barrels per day. Regional refineries are expected to produce an average of 1.4 billion gallons a month in 2007, an increase of 1.2 percent over 2006.

National gasoline inventories are well below the five-year range for this time of year, adding upward pressure on retail prices. On September 28, 2007, U.S. gasoline inventories were 191.3 million barrels, about 11 percent lower than this time last year. The current level represents almost 21 days of U.S. supply, down slightly from a year ago. Midwest inventories were 47.1 million barrels on September 28, 2007, a decrease of 11.6 percent and below the five-year range for this time of year. Regional inventories are currently below those of recent years with an expected year-end average of 564.9 million gallons, 4.9 percent below 2006.

Price

Gasoline prices in Michigan reached a new record high on May 26, 2007 when AAA Michigan reported an average price of $3.53 per gallon, topping the previous record high on August 2, 2006 of $3.09 per gallon. Prices have retreated from these record levels and according to AAA as of October 9, 2007, the average Detroit area retail gasoline price was $2.86 per gallon, 67 cents below the record high.

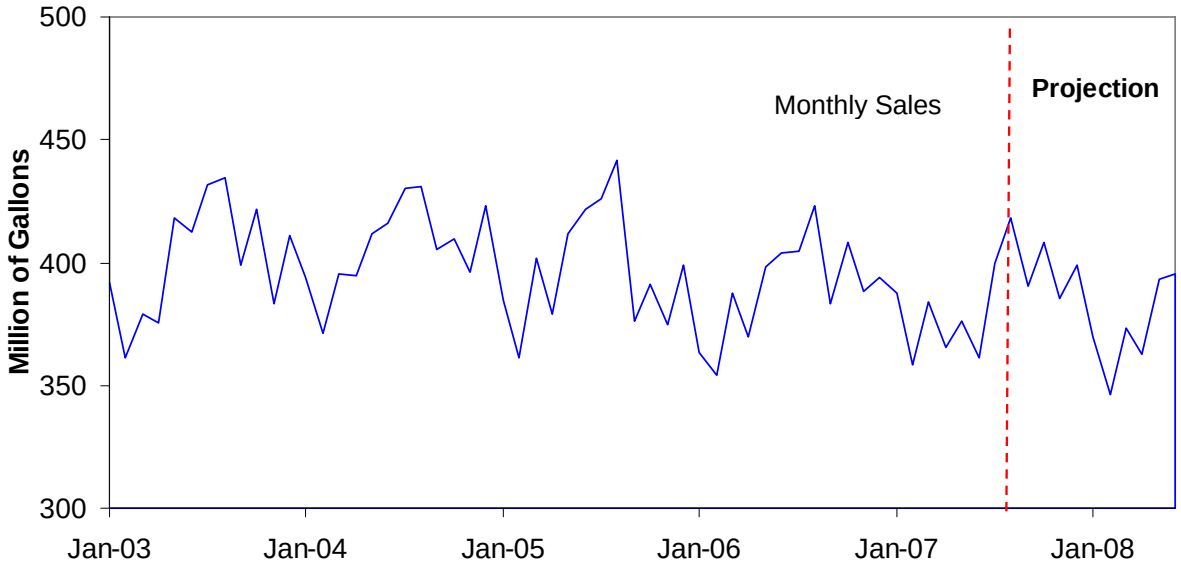
With unexpected outages at two of the Midwest's larger refineries in April and May and again in July plus additional production problems at other U.S. refineries, gasoline prices in the spring of 2007 rose more quickly and higher than was expected. True to projections, prices did peak around Memorial Day, but at a much higher level than anticipated. Similar price increases were felt nationwide, as refinery problems plagued most regions of the country. In the Midwest, because of low inventories and refinery problems there is substantially less capability to

minimize any unexpected disruptions to production or distribution, which results in increased price vulnerability.

Two additional factors that will affect gasoline prices are the seasonal decline in demand following the summer driving season and the September 15th shift to winter grade gasoline, which is less costly to produce. EIA indicates that national gasoline prices are projected to average about $2.63 per gallon through the rest of 2007.

Further information on Michigan gasoline prices can be found at: http://michigan.gov/gasprices, along with information on how to file complaints and tips on saving gasoline.

Michigan Gasoline Sales

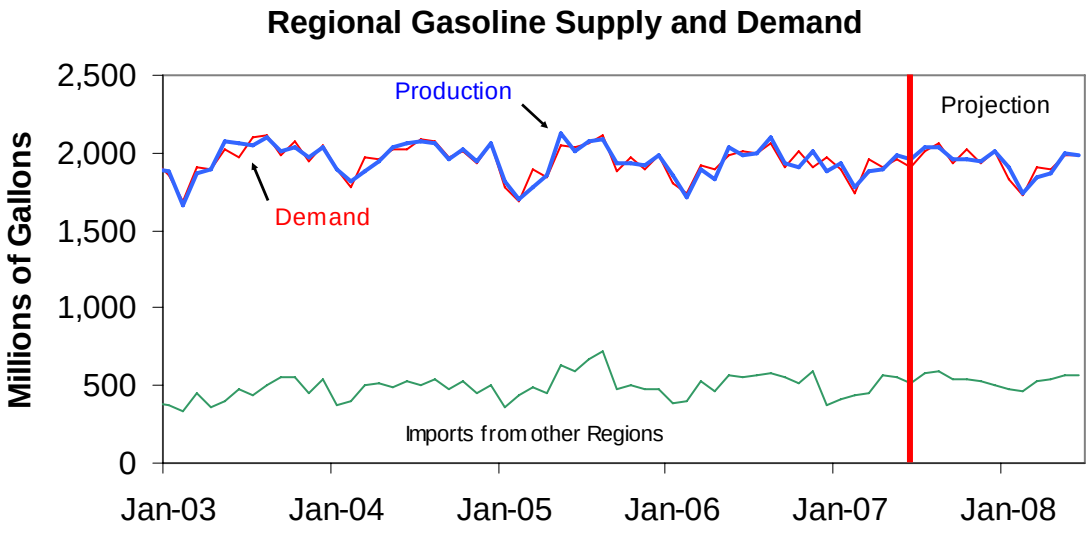


Michigan Gasoline Sales Projections

(Millions of Gallons)

			Total All Grades	Historical (prior year)	% Change
Historical	2004	Total	4,877.1	4,819.2	1.2%
	2005	Total	4,769.2	4,877.1	-2.2%
	2006	Total	4,678.0	4,769.2	-1.9%
	2007	January	387.2	363.0	6.7%
		February	358.6	353.9	1.3%
		March	383.9	387.4	-0.9%
		April	365.7	369.5	-1.0%
		May	376.0	398.5	-5.6%
		June	361.3	404.1	-10.6%
Projection		July	399.6	404.5	-1.2%
		August	418.2	423.3	-1.2%
		September	390.2	383.5	1.7%
		October	407.9	408.2	-0.1%
		November	385.5	388.2	-0.7%
		December	399.0	393.9	1.3%
	2007	Total	4,632.9	4,678.0	-1.0%
	2006-2007 change		-1.0%		
	2008	January	370.0	387.2	-4.4%
		February	346.2	358.6	-3.5%
		March	373.1	383.9	-2.8%
		April	362.5	365.7	-0.9%
		May	392.9	376.0	4.5%
		June	395.6	361.3	9.5%

NOTE: These projections are based on moderate growth in Michigan's economy and stable gas prices.
SOURCE: Historical data - Energy Information Administration, U.S. Department of Energy.
Projections – Energy Data and Security Section, MPSC



Regional Gasoline Supply and Demand

(Millions of Gallons)

			Production	Inventories	Demand
Historical	2004	Average	1,496.0	611.0	1,984.0
	2005	Average	1,409.0	593.9	1,933.3
	2006	Average	1,422.4	586.0	1,933.5
	2007	January	1,519.6	581.4	1,899.5
		February	1,338.5	616.2	1,741.6
		March	1,421.0	534.2	1,960.0
		April	1,316.7	515.0	1,909.2
		May	1,425.7	529.2	1,964.8
		June	1,440.7	577.1	1,906.7
Projection		July	1,455.5	598.1	2,011.7
		August	1,439.9	575.2	2,058.7
		September	1,410.5	604.5	1,928.4
		October	1,420.7	541.3	2,027.7
		November	1,415.4	554.6	1,930.1
		December	1,498.7	551.7	2,008.8
	2007	Average	1,425.2	564.9	1,945.6
2006-2007 change			1.2%	-4.9%	0.6%
	2008	January	1,439.7	630.8	1,831.1
		February	1,265.9	633.4	1,732.3
		March	1,310.7	563.7	1,909.5
		April	1,329.9	542.7	1,888.8
		May	1,439.7	556.2	1,989.3
		June	1,415.4	556.6	1,986.4

NOTE: 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 and Security Section, MPSC

Gasoline Supply and Demand

(Thousands of Gallons)

		Regional Production	Regional Inventories	Michigan Inventories	Michigan Demand
2002	**Average**	1,494,581	648,029	111,493	399,590
2003	**Average**	1,518,969	630,984	107,625	401,601
2004	**Average**	1,496,028	613,449	92,488	406,423
2005	January	1,450,386	644,280	85,050	384,473
	February	1,252,104	653,142	92,106	361,559
	March	1,287,132	537,222	88,578	401,702
	April	1,397,214	542,430	69,048	378,694
	May	1,492,554	615,090	84,126	412,064
	June	1,414,560	584,892	81,984	422,040
	July	1,406,202	591,822	89,586	425,882
	August	1,369,200	569,268	105,588	441,665
	September	1,461,264	622,524	128,058	376,027
	October	1,426,110	579,978	105,168	391,424
	November	1,444,590	597,576	110,964	374,721
	December	1,507,086	588,798	93,786	398,905
	Average	1,409,034	593,919	94,504	397,430
2006	January	1,465,800	630,168	105,588	363,028
	February	1,318,170	613,032	92,652	353,909
	March	1,373,274	593,796	83,034	387,434
	April	1,361,136	530,586	80,430	369,510
	May	1,467,900	591,024	89,292	398,450
	June	1,428,504	568,806	93,492	404,121
	July	1,421,616	560,490	89,796	404,491
	August	1,525,524	599,172	103,824	423,302
	September	1,380,834	629,412	95,466	383,510
	October	1,400,868	532,560	79,842	408,158
	November	1,422,120	637,182	106,344	388,176
	December	1,503,306	546,252	95,802	393,875
	Average	1,422,421	586,040	92,964	389,830

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

For 2007, distillate deliveries are projected to increase by 3.6 percent to 1.13 billion gallons. The three principal factors affecting distillate usage in Michigan are industrial production, price, and winter weather; of these industrial production is the biggest determinant. Diesel fuel accounts for approximately 93 percent of the total distillate consumption on average. Diesel fuel sales should increase 2.2 percent over the level seen in 2006. Although price is a main driver of diesel fuel demand, a major drop in sales was not seen in response to the higher prices this summer. EIA has changed its reporting procedure for distillate oil which has increased the frequency of withheld "w" data so that the separate reporting of #1 and #2 fuel oils is no longer possible. They are now shown as a combined total.

Supply

Midwest refineries are expected to produce an average of 727.9 million gallons of distillate fuel oil per month in 2007. This is an increase of 1.5 percent over 2006, and the fifth straight year of increasing regional distillate production. Distillate inventories for the region stand 12.1 percent above the end of year average for 2006. The projected 2007 monthly average is 13.8 percent above the 2006 average. On September 21, 2007 national inventories of distillate oil were 137.1 million barrels, approximately 14.2 million barrels below year ago levels. This puts stocks at the high end of the five-year average range for this time of year. Midwest inventories were 29.7 million barrels on September 21, 2007, slightly above last September's levels of 28.8 million barrels. Inventories have been up and down all year, but have jumped up into the midpoint of the normal range for this time of year. Inventory changes are used to balance refinery production and demand and are a relatively small component of the day-to-day supply. Regional inventories are within typical levels seen in recent years at just over 477 million gallons.

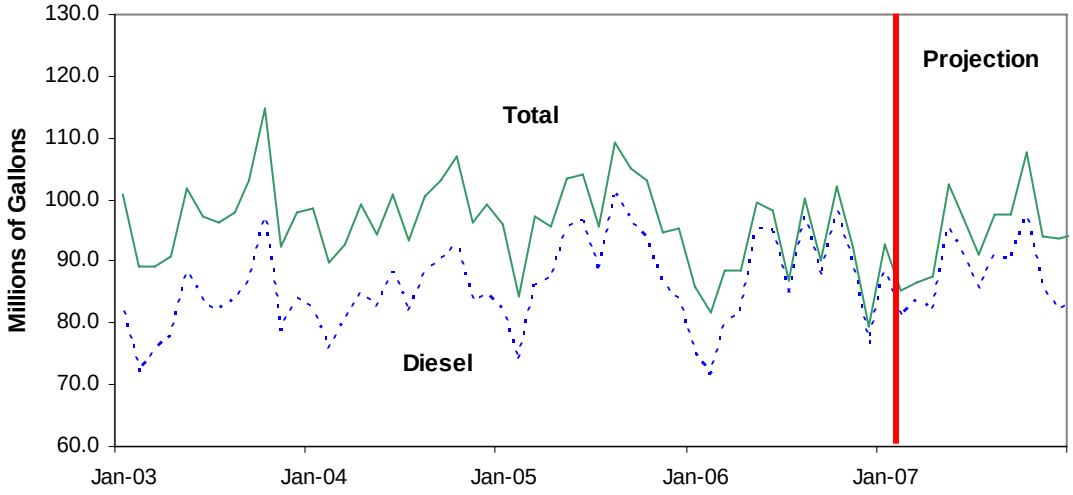
Price

On October 8, 2007, the average price of #2 home heating oil in Michigan was $2.84 per gallon (excluding the 4 percent sales tax), up 57 cents from a year ago. On the last survey date this spring, March 26, 2007, the average Michigan price was $2.48. This increase will translate into higher heating bills this winter and are the result of higher crude oil prices.

A warmer than normal winter would help moderate prices. Conversely, colder than normal temperatures this winter will drive up demand and could cause seasonal price increases. The price driver for heating oil is crude oil price, which has been climbing all year. This has contributed to the increase in heating oil prices expected for this winter heating season.

Diesel fuel prices in Michigan were $3.15 per gallon on October 9, 2007, down 10 cents per gallon from last month, but 34 cents above the $2.81 price seen a year ago. The record high price remains $3.48 per gallon reported on October 25, 2005.

Michigan Distillate Fuel Oil Sales



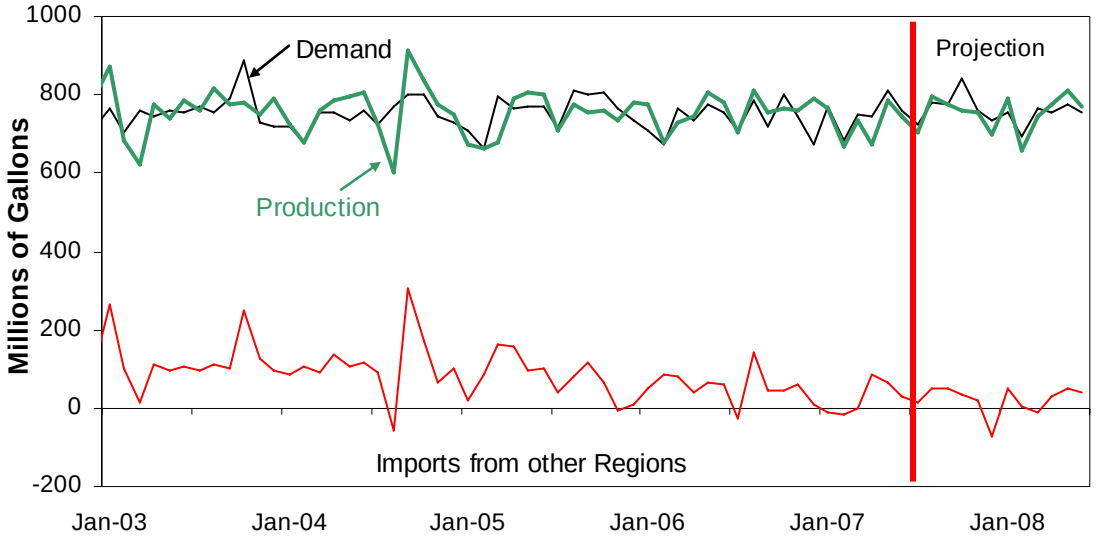
Michigan Distillate Fuel Oil Sales Projection

(Millions of Gallons)

			No. 1 & 2 Fuel Oil	Diesel Fuel	Total Distillate	Prior Year	% Change
Historical	2004	Total *	159.1	1,015.9	1,175.0	1,171.4	0.3%
	2005	Total *	112.6	1,071.4	1,184.1	1,175.0	0.8%
	2006	Total *	62.0	1,031.4	1,093.4	1,184.1	-7.7%
	2007	January	4.1	88.6	92.7	85.9	7.9%
		February	4.1	81.2	85.3	81.8	4.2%
		March	2.9	83.6	86.5	88.5	-2.2%
Projection		April	5.6	82.0	87.6	88.5	-1.0%
		May	6.6	95.7	102.3	99.5	2.8%
		June	6.2	91.1	97.3	98.1	-0.8%
		July	5.6	85.5	91.1	86.9	4.8%
		August	6.2	91.3	97.5	100.2	-2.8%
		September	7.4	90.1	97.4	90.2	8.0%
		October	10.0	97.6	107.6	102.1	5.4%
		November	8.4	85.6	94.0	92.3	1.9%
		December	11.5	82.3	93.8	79.4	18.2%
	2007	Total	78.7	1,054.6	1,133.3	1,093.4	3.6%
	2008	January	11.3	82.9	94.2	92.7	1.6%
		February	9.3	77.3	86.6	85.3	1.5%
		March	8.7	83.2	91.8	86.5	6.1%
		April	7.4	85.4	92.8	88.4	4.9%
		May	8.0	92.3	100.3	104.4	-3.9%
		June	7.3	91.1	98.4	99.3	-0.9%

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. EIA has changed its reporting procedure for distillate oil which no longer allows the separate reporting of #1 and #2 fuel oils.
SOURCES: Historical data -- Energy Information Administration, U.S. Department of Energy. 'Projections – Energy Data and Security Section, MPSC. * = revised

Regional Distillate Fuel Supply and Demand



Regional Distillate Fuel Oil Supply and Demand

(Millions of Gallons)

			Production	Inventories	Demand
Historical	2004	Average	666.1	436.4	747.7
	2005	Average	703.0	458.3	759.2
	2006	Average	717.0	425.9	736.9
	2007	January	737.9	462.6	770.7
		February	652.5	439.6	681.4
		March	754.1	434.0	750.4
		April	747.1	466.7	744.9
		May	763.5	467.5	811.8
		June	730.3	477.3	758.3
Projection		July	717.8	501.4	723.6
		August	726.7	500.6	780.1
		September	711.9	514.6	774.4
		October	714.8	468.9	839.4
		November	730.0	517.2	757.7
		December	748.2	565.9	735.7
	2007	Average	727.9	484.7	760.7
	2008	January	728.4	557.0	754.1
		February	654.3	533.8	692.0
		March	674.4	478.7	767.5
		April	688.9	477.9	755.7
		May	741.2	496.2	773.5
		June	721.3	508.4	752.8

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. Due to changes in EIA reporting, demand figures for 2007 have been estimated.
SOURCES: Historical data -- Energy Information Administration, U.S. Department of Energy; Projection - Energy Data and Security Section, MPSC.

Distillate Fuel Oil Supply and Demand

(Thousands of Gallons)

		Regional Production	Regional Inventories	Michigan Inventories	Deliveries to Michigan			
					#1 Fuel	#2 Fuel	Diesel	Total
2002	Average	638,820	468,524	56,644	3,130	12,633	81,804	96,262
2003	Average	652,677	452,347	51,723	3,349	12,391	82,714	97,058
2004	Average	666,085	436,356	47,152	2,525	10,799	84,623	96,894
2005	January	722,526	461,958	50,274	w	8,323	82,003	90,326
	February	592,746	491,064	50,274	3,539	6,904	73,882	84,325
	March	649,236	418,614	46,032	3,082	7,778	86,395	97,255
	April	705,264	400,596	43,386	1,178	7,252	87,353	95,783
	May	740,754	427,140	45,570	w	7,118	95,291	102,409
	June	717,486	438,102	44,268	w	6,583	96,495	103,078
	July	725,676	474,726	48,468	w	6,304	88,221	94,525
	August	670,110	472,752	47,502	w	6,788	100,900	107,688
	September	708,666	427,308	55,356	w	6,726	96,745	103,471
	October	720,132	386,316	38,850	1,563	7,206	93,628	102,397
	November	702,618	379,554	45,444	w	5,405	86,411	91,816
	December	780,822	433,944	46,746	w	6,032	84,081	90,113
	Average	703,003	434,340	46,848	1,337	6,868	89,284	96,932
2006	January	775,950	487,410	57,918	w	5,486	74,969	80,455
	February	687,078	485,226	46,536	w	5,872	71,687	77,559
	March	737,142	454,230	56,070	w	5,567	79,767	85,334
	April	585,186	389,298	44,604	w	5,206	81,901	87,107
	May	719,334	402,906	37,842	w	3,079	95,212	98,291
	June	710,850	391,566	38,178	1,243	2,050	95,213	98,506
	July	689,976	386,106	39,270	w	1,578	94,947	96,525
	August	742,308	394,758	33,978	w	1,578	84,274	85,851
	September	724,500	450,114	45,696	1,545	1,086	97,253	99,884
	October	724,332	407,988	29,862	w	1,544	87,552	89,096
	November	734,790	418,152	41,706	1,899	1,011	98,081	100,991
	December	772,464	442,722	45,906	2,179	778	89,349	92,306
	Average	716,993	425,873	43,131	981	2,903	87,517	90,992

NOTES: The region includes Illinois, Indiana, Kentucky, Michigan, Tennessee, and Ohio. Inventory and production data include all distillate categories. w = Withheld to avoid disclosure of individual company data.
SOURCES: Energy Information Administration, U.S. Department of Energy.

Michigan Household Winter Heating Fuel Summary

	Weather		Weather Normalized	
	Actual 2006-2007	*Normalized* 2006-2007	Projections[1] 2007-2008	% Change 2006/2007
Natural Gas				
Consumption (Mcf)	72	76	76	
Avg. Price ($/Mcf)	$9.86	$9.86	$10.05	2%
Expenditures ($)	$710	$749	$764	8%
Heating Oil				
Consumption (gallons)	531	561	561	
Avg. Price ($/gallon)	$2.36	$2.36	$2.84	20%
Expenditures ($)	$1,254	$1,324	$1,593	27%
Propane				
Consumption (gallons)	753	795	795	
Avg. Price ($/gallon)	$1.89	$1.89	$2.04	8%
Expenditures ($)	$1,423	$1,503	$1,622	14%
Heating degree days % Departure from Normal	-5.6	0	0	

[1] Projections based on usage assuming normal weather and the weighted average residential space heating price for November to March each season. Natural Gas prices are based on October 2007's average rates for Michigan's gas utilities, including distribution and customer charge plus the cost of gas. Heating oil and propane prices are based on the October 8, 2007 average Michigan residential prices which are assumed to hold constant over the winter. Colder weather and/or increases in crude oil prices would affect this assumption. Winter consumption is over the November to March each season.

This analysis shows Michigan consumption estimates from natural gas utilities, and propane and heating oil usage from the EIA's "Residential Consumption Survey." The actual usage for any given home will depend on many factors and the relative energy efficiency of the home. These figures are intended to show the relative magnitude of the change in price. While normal temperatures are assumed, departures from normal can have a significant affect on fuel bills. In Michigan, 79 percent of homes are heated with natural gas, 10 percent with propane, 7 percent with electricity, and 4 percent with #2 heating oil.

- The average natural gas price in Michigan for October 2007 is $10.05 per Mcf , 2 percent higher than last winter's average.
- On October 8, 2007 #2 heating oil prices were $2.84 per gallon, an increase of 20 percent over last year's average weekly price of $2.36. Prices this winter will depend on the price of crude oil which could vary substantially.
- On October 8, 2007 propane prices averaged $2.04 per gallon, an increase of 8 percent over last year's average weekly price of $1.87. Propane is produced from both crude oil and natural gas. Crude oil prices could vary substantially and lower natural gas and crude oil prices could help moderate the average propane price over the winter.

To compare the prices of different fuels when the unit of measure differs, use the common unit of measure for energy which is a British thermal unit. A Btu is the quantity of heat required to

raise the temperature of 1 pound of liquid water by 1 degree Fahrenheit. The heating content of various fuels can differ: the number of Btu's in an Mcf of natural gas equals 1,031,000; for #2 heating oil, there are 138,690 Btu's per gallon; and for propane there are 91,330 Btu's per gallon. This is the heating potential for the fuel. To compare prices the cost per unit is divided by the Btu's per unit and multiplied by the unit price to show the cost in millions of Btu's. Additionally, furnaces have different efficiencies and taking this into account can change the actual cost for heating purposes when comparing heating fuels. This being said, the current cost of natural gas is $9.75 per million Btu's, #2 heating oil costs $20.48 per million Btu's and propane costs $22.34 per million Btu's.

The National Weather Service is projecting that the temperatures in the Great Lakes region will be warmer than normal from October 2007 through March 2008. Should the weather once again be warmer than normal, the projected heating bills shown in this analysis will be lower than these estimates based on normal weather. This would continue a trend seen over the last six heating seasons in Michigan where heating degree days have averaged 5 percent warmer than normal. This in turn would mean somewhat lower heating bills than estimates based on normal temperatures.

Ways to Lower Heating Bills

- Lower temperatures at night and when no one is home. A programmable thermostat can be set to do this automatically.
- Clean or replace the furnace air filter regularly following the manufacturer's recommendations.
- Have an annual inspection and maintenance done on the furnace.
- Check heating ducts for air leaks and insulate those in unheated areas.
- Caulk and weather-strip around doors and windows. Close curtains at night during the winter.
- Add insulation to the attic and walls – including the basement rim joist walls.
- When purchasing new appliances, furnaces, windows, or a new home, look for those with the ENERGY STAR® logo, signifying they meet energy efficiency standards.

Ways to Lower Energy Bills

Additionally, even if heating bills can't be lowered any further, steps can be taken to lower overall energy bills by lowering electricity usage and overall energy consumption. An easy way to lower electricity bills is to replace incandescent light bulbs with compact fluorescent light bulbs (CFLs). Qualified CFLs use 75% less energy than incandescent bulbs and last 6–10 times longer. For more information on the Change a Light Campaign, go to http://www.michigan.gov/mpsc and click on the ENERGY STAR® Change a Light button. Additionally, there is information on other ENERGY STAR® energy saving applicances and other steps that can be taken to save energy and lower bills.

- Laundry: Wash clothes in warm or cold water when possible. Dry clothes outside on a clothesline or inside on a rack instead of using the dryer. Fill the washer or dryer when doing your laundry. Clean the dryer lint trap after each use.
- Water Heater: Set the hot water heater to120 degrees F, if you have a dishwasher without a booster heater, it may require a water temperature within a range of 130ºF to 140ºF for optimum cleaning.

- Insulate the water heater and hot water pipes following the manufacturer's instructions.
- Refrigerator: Keep fresh foods at 37 to 42°F, frozen foods at 0 to 5°F. Keep the refrigerator closed. Opening the door wastes a lot of energy. Keep the refrigerator full; it'll operate more efficiently.
- Dishwasher: Wash only full loads. Use the energy saver, air dry cycle or open the door and let dishes dry naturally.
- Cooking: Don't preheat the oven. Cook complete meals of several dishes simultaneously in the oven. Use the microwave oven when possible.
- Lighting: Replace incandescent bulbs with compact fluorescent bulbs. Use dimmer switches, timers, or motion sensors on incandescent lights. Turn lights off when leaving rooms.
- Transportation: Drive an energy efficient car and save on gasoline. Carpool and combine trips when possible. Use public transportation when possible

For more information see: michigan.gov/bewinterwise where users can find information on natural gas prices, conservation and efficiency measures to help offset price increases and low-income energy assistance programs. Other Web sites of interest are the U.S. DOE Web site, http://www1.eere.energy.gov/consumer/tips/ and the Home Energy Saver, http://hes.lbl.gov.

Corrections, please:

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:

[ ] Please add my name to your mailing list.
[ ] Please remove my name from your mailing list.
[ ] Please add my email address instead of the regular mailing address.
[ ] Please make the following address corrections:

Name_____

Organization_____

Address_____

City_____State_____Zip_____

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