



NATIONAL
OCEAN
INDUSTRIES
ASSOCIATION

ENERGY CHALLENGES FOR MICHIGAN AND THE NATION

NOIA'S MISSION IS TO SECURE RELIABLE ACCESS TO THE NATION'S VALUABLE OFFSHORE ENERGY RESOURCES IN ORDER THAT THEY MAY BE DEVELOPED, PRODUCED AND SUPPLIED IN AN ENVIRONMENTALLY RESPONSIBLE MANNER.

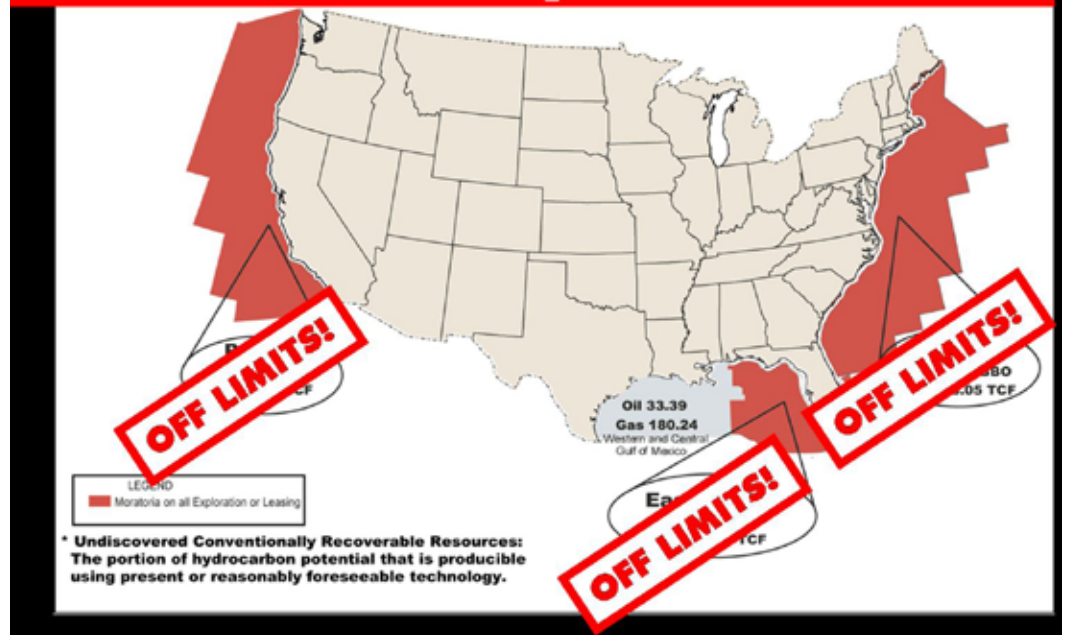
Today, energy prices are on the rise across the nation. This affects individual citizens, industrial consumers, and the agricultural industry. But why is this so?

It all comes back to supply and demand. As the economy has grown, the demand for energy has grown every year. At the same time, however, policymakers have refused to make any changes to increase available supplies of energy. For example, over 80% of the nation's oil and natural gas resources on the Outer Continental Shelf is completely off-limits to exploration and production, despite a decades-long record of safe offshore production in the Central and Western Gulf of Mexico.

What can be done? Energy consuming states must make themselves heard and push for changes to policies like this that limit energy supply. This is key to long-term strategies to control prices and maintain economic growth and employment at home.



Less than 19% of OCS is Open to Development



ENERGY PRICES: A NATIONAL PERSPECTIVE

- In the last 25 years, our energy consumption has grown by 30 percent, while supply only increased at half that rate. In just the past decade, as our economy grew, energy consumption increased by more than 12 percent. But our domestic production increased by less than one-half of 1 percent.
- Between now and 2030 – just less than 25 years from now – we will need 55 percent more electricity than we generate today and consumption of all sources of energy are expected to increase:
 - o *Petroleum by 41 percent*
 - o *Natural gas by 33 percent*
 - o *Coal by 41 percent*
 - o *Renewable energy by 39 percent*
- The Energy Information Administration predicted on Jan. 11 that the average U.S. home heating bill in 2006 will increase by \$257, or 35 percent, for natural-gas heat; \$275, or 23 percent, for oil heat; and \$184, or 17 percent, for propane heat.
- The price of U.S. natural gas has hit peaks recently of about \$15/million btu's, the rough equivalent of paying \$7 a gallon for gasoline.
 - o *This is more than double what they pay in China, and 50 percent higher than prices in the United Kingdom. The U.S. price is 20 times what Saudi Arabians pay.*
- High energy prices, particularly for natural gas, have cost the economy 2.8 million jobs since 2000.
- More than 100,000 lost jobs in the chemical industry, and the closure of 70 chemical facilities in 2004 alone, have resulted from high prices of natural gas.
- During the 2003 and 2004 growing seasons, farmers paid more than \$6 billion in added energy-related expenses, a 41% increase over 2004, according to USDA's Economic Research Service.



MICHIGAN ENERGY CONSUMPTION AND OUTLOOK:

- Most Michigan residences (87%) are heated with natural gas.
- Approximately 75% of the natural gas consumed in Michigan is imported.
- 12 utilities provide natural gas service to approximately 3 million customers who consume over 900 billion cubic feet of natural gas per year.
- Demand for natural gas in Michigan for 2006 was tempered by a warm winter and is expected to increase by 0.8%. In 2005, however, the increase in demand was 5.5%.
- Michigan has seen a dramatic increase in the use of natural gas as a fuel, from 1993 to 2003. From 1993 to 2002, natural gas rose from 8% of Michigan's electric generating capacity to 25%, equal to the national average.
- The Michigan average wholesale cost of gas is projected to be \$9.67 per thousand cubic feet (Mcf), for the April 2006 through March 2007 period. The annual gas bill for a typical residential customer is projected to be \$1,317 for the April 2006 to may 2007 period.
- Michigan residential heating oil prices averaged \$2.33 per gallon on March 27, 2006 (excluding sales tax), the last survey date for the winter fuels. One year earlier, the average price was \$2.00.
- The 2006 Michigan Energy Appraisal Summer Outlook projects peak demand of 21,365 MW for the Detroit Edison and Consumers Energy service areas. This demand will be more than 720 MW above the in-state generating capacity of 19,250 MW, so purchases of power are being made to assure adequate reserves.
- Electric power demand in Michigan is projected to increase at approximately 2.1% annually over the next 20 years, according to the 2006 Michigan Capacity Need Forum. Peak demand is forecast to grow at 1.7% annually in the southeastern Michigan, 2.7% in the balance of the Lower Peninsula of Michigan, and .9% in the Upper Peninsula.
- Michigan's Capacity Need Forum calculated the cost of meeting the state's single year 2005 electricity demand to be \$3.3 billion. Current resources, however, will not be able to meet projected growth over the next ten years, compromising the State's electric reliability.
- Energy costs for municipal operations in Ann Arbor have risen from \$4.98 million in FY 03-04 to an estimated \$6.87 million in FY 06-07, a 38% increase.

INCREASING ENERGY PRICES HURT MANUFACTURING INDUSTRIES, IMPERILING MICHIGAN JOBS:

- In November 2005, Michigan was home to more than 668,800 manufacturing jobs, paying employees an average of \$56,070/year, 38% higher than the state's overall average. Unfortunately, rising energy costs have contributed to the loss of more than 227,900 of these high-wage manufacturing jobs since 2000.



chemical, plastic and rubber manufacturing – which depend on natural gas as critical input – accounted for more than \$3.9 billion in Michigan exports in 2005 and support more than 27,730 jobs directly. These manufacturing jobs are also in jeopardy due to the high price of natural gas.

Michigan's forest products industry is one of the state's top manufacturing industries, employing nearly 45,000 workers with an annual payroll over \$1.6 billion. Michigan's paper and wood manufacturing workforce represents more than four% of the state's total manufacturing workforce, but these jobs are also in jeopardy due to the high price of natural gas.

- Today, energy is the third largest manufacturing cost for the forest products industry (18% for pulp and paper mills), growing quickly enough to eclipse employee compensation.

INCREASING ENERGY PRICES SQUEEZE SCHOOLS, SMALL BUSINESSES AND INDIVIDUAL CONSUMERS:

- Michigan schools' energy and utility costs account for 2 – 4% of a district's overall budget, according to the Michigan School Business Officials. The Troy district, in suburban Detroit, spends more than \$3 million each year on energy costs. Between diesel fuel for buses, electricity, and gas, Byron Center Public Schools are expecting a \$160,000 increase in energy costs over a time period of one school year, and next year there will be a 70% increase in heating costs. Nationally, school districts across the country spend \$6 billion on energy in a given year, the second-largest expense for schools after personnel.
- In 2004, there were about 26,800 computers on the University of Michigan campus. PC operations alone accounted for at least \$1.86 million in energy costs to the University each year, or approximately 12.4% of the total spent on electricity.
- 75% of Michigan's small businesses said the recent run-up in energy prices had some negative impact on their business, according to a November 2005 survey by the Michigan chapter of the National Federation of Independent Business.
- 70.1% of Michigan residents are very concerned about the impact of rising energy costs on their monthly income, according to a January 2006 State of the State Survey conducted by Michigan State University; 23.5% are somewhat concerned. More than 86% recognized the rising cost of energy to be a long-term problem. And, more than 42% said that, very often, they make decisions about where they do business, go shopping or go on vacation because of the cost of fuel, while 36% said they some times consider the cost of fuel before carrying out these activities.





- Almost half of Michigan residents' energy bills go to home heating, bills that are only getting bigger. The average energy bill for Michigan homes heated with natural gas or heating oil will increase by about \$270 in 2006. Propane-heated home owners will see their bills rise by about \$235, while electric heating costs will rise by about \$85.
- In 2005, Michigan distributed over \$113 million in Low Income Home Energy Assistance (LIHEAP) funding to more than 380,000 eligible households to help pay their heating and cooling bills.
- A May 2006 statewide study commissioned by The Heat and Warmth Fund showed that 57% of Michigan households have felt either a major or significant impact on their spending because of increased energy costs, with 15% having borrowed money or used a credit card to pay their bills or make energy efficient home improvements.
- Michigan's gasoline prices are currently about 30% higher than one year ago. At today's prices, Michigan households pay about \$3,000 annually for gasoline.

INCREASING ENERGY PRICES SQUEEZE FARMERS AND AGRICULTURAL INDUSTRIES:

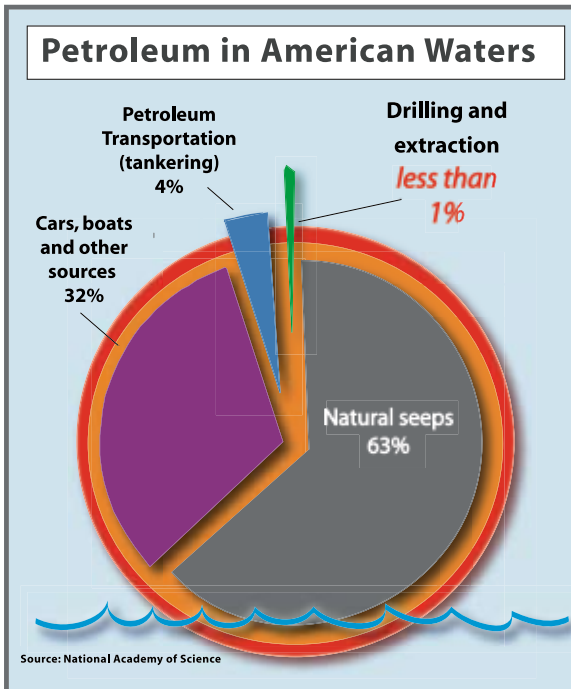


- Michigan is home to more than 53,000 farms, 97% of these are family owned farms, many of which have been in the same family for generations. Michigan's agriculture industry contributes over \$4 billion annually to the state's economy and is Michigan's second largest industry next to the auto industry.
- Michigan produced more than 6.7 billion pounds of milk in 2005 which was used for both milk and cheese. In 2005, cash receipts by Michigan milk producers were \$1.02 billion, up 1% from 2004. Throughout the nation, many dairy farmers have been impacted by high energy costs with increases in feed stock, motors, lighting, and transportation costs.
- Michigan's floriculture industry, which ranks third nationally in the value of wholesale sales of \$384 million. According to Gale Arent, executive Director of the Michigan floriculture Growers Council said, "Many of our growers made agreements with commercial buyers before the natural gas prices reached record high levels in October 2005. Some of the growers will not be profitable this year, and may even be forced to shut down because they won't recover their increased energy expenses."
- According to the Food and Agriculture Policy Research Institute, fertilizer costs are up 70% and fuel costs are up 113% since 2002. From 2005 to 2006, the prices are expected to rise another 10 to 15% and almost 10%, respectively.

A PLAN OF ACTION:

What can be done to increase energy supplies?

- Call on Congress and the Administration to cultivate a plentiful, diverse and affordable energy supply for America.
- Pursue renewable technologies such as offshore wind and tidal power and the development of offshore methane hydrates.
- Promote energy conservation and greater efficiency.
- Increase refining capacity and import facilities.
- Provide access to the Outer Continental Shelf (OCS) for exploration and development of the nation’s valuable offshore energy resources in an environmentally responsible manner. Over 80 percent of all federally controlled coastal waters are currently off-limits to energy exploration and production, yet the OCS is conservatively estimated to hold over 419 trillion cubic feet of technically recoverable natural gas resources and 86 billion barrels of oil. This is enough:
 - natural gas to heat 100 million homes for 60 years.
 - oil to drive 85 million cars for 35 years.
 - oil to replace current Persian Gulf imports for 59 years.



Offshore drilling is safe: Less than 1% of oil found in the ocean comes from offshore production, significantly less than results from natural geologic seeps and run-off from land-based sources