



NATIONAL
OCEAN
INDUSTRIES
ASSOCIATION

ENERGY CHALLENGES FOR ILLINOIS 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 –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*
- In 2006, consumers may pay as much as 48 percent more for natural gas than last year and at least 31 percent more for home heating oil.
- 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.

ILLINOIS ENERGY CONSUMPTION

- Illinois spends over \$30 billion each year on energy, ranking 7th nationally in total energy consumption.
- In 2003, Illinois' energy consumption by sector was: 31 % industrial, 25 % residential, 24 % transportation, and 20 % commercial.
- Total energy consumption in Illinois increased by over 10 billion kilowatt-hours between 1980 and 2001. During that same period, electricity consumption rose by 38 billion kilowatt-hours, an average annual increase of 1.6 %.
- Illinois' electricity use between 2001 and 2025 is expected to grow by 1.3 % annually, exhausting nearly all of the current generating capacity by 2020. Therefore, Illinois power producers will require significant power plant additions to meet projected electricity demand for Illinois customers while continuing to export to customers in other states.
- Natural gas demand in the East North Central Census Region – Illinois, Indiana, Michigan, Ohio, and Wisconsin – will remain high, increasing by 2.9 % from 8.62 Bcf per day in 2007 to 8.87 Bcf per day in 2008. Prices are projected to increase about 3.3 % in 2007.

ILLINOIS ENERGY RESOURCES AND PRODUCTION

- Illinois relies on nuclear and coal-fired plants to produce 96 % of the State's electricity. The remainder comes from hydroelectric, natural gas, and petroleum-fired power plants.
- Illinois is home to 6 nuclear power plants and accounts for roughly one-tenth of the United States' total nuclear-powered electricity generation.
- The first oil wells in the State were drilled in Clark and Montgomery counties in the early 1860's. Currently, the State ranks 14th nationally in the production of liquid hydrocarbons, with more than 32,000 oil and gas wells producing more than 10 million barrels of oil and more than 160 million cubic feet of natural gas annually. The State has an estimated 95 million barrels of crude oil reserves.
- Illinois leads the Midwest in refining capacity, with four refineries – Wood River, Joliet, Robinson, and Lemont – located in the State.
- In 2005, Illinois' production of coal was 32 million tons, and the State has reserves of 747 million tons. Coal underlies 37,000 square miles of Illinois – about 65 % of the State's surface – with mining activity occurring in 10 counties in 2005.



ILLINOIS





- The Illinois Basin – Illinois, Indiana, and Kentucky – has over 325 billion tons of remaining coal resources, estimated to contain 11 trillion cubic feet, or more, of coalbed methane gas.

ILLINOIS ALTERNATIVE / RENEWABLE ENERGY:

- Illinois is already one of the top producers of ethanol in the Nation and hopes to build up to 20 conventional ethanol plants over the next five years. In addition, the State is investing \$100 million over the next 10 years to build four plants using newer technology to convert plant waste materials, such as corn husks and wood pulp, to ethanol.
- In 2006, the Governor announced that the State will power 141 state facilities in Springfield with wind power by July 2007.
- Also in 2006, the Illinois Governor unveiled a comprehensive long-term energy plan that would meet 50 % of the State's motor fuel needs with alternative sources made from crops and coal by 2017. The plan also includes building 10 coal gasification plants to convert Illinois coal into natural gas, diesel fuel, and electricity, and construction of a pipeline from Central to Southeastern Illinois to transport carbon dioxide emitted by power plants to where it can be used to extract more oil and gas from existing reservoirs.
- In January 2007, the Governor signed legislation requiring state agencies to purchase flex-fuel vehicles that can run on E-85, an 85 percent blend of ethanol and gasoline, and diesel powered vehicles that run on B-5, a blend of 5 percent biodiesel and diesel. As a result, 16 % of the State's 12,100 vehicle fleet can now run on E-85.

INCREASING ENERGY PRICES HURT MANUFACTURING INDUSTRIES, IMPERILING ILLINOIS JOBS:

- Illinois is one of the Nation's manufacturing leaders, with 35 Illinois-based manufacturers included in Industry Week's list of the Top 500 U.S. Manufacturers in 2005.
- As of November 2006, Illinois was home to approximately 675,000 manufacturing jobs, paying employees an average of \$50,400/year, 15 % higher than the average for the State. Rising energy costs, however, have contributed to the loss of more than 175,000 of these high-wage manufacturing jobs since 2000.
- Chemical and plastic manufacturing – which depend on natural gas as a critical input – accounted for more than \$6.5 billion in Illinois exports and directly supported more than 50,000 jobs in 2005. These jobs, however, are in jeopardy due



to the high price of natural gas.

- Illinois has more than 4 million acres of forested land, and its forest products industry ranks as one of the State's top manufacturing industries, employing approximately 35,000 workers with an annual payroll of nearly \$2 billion.
- Today, energy is the third largest manufacturing cost, at 18 %, for the forest products industry, eclipsing even employee compensation.
- Nationally, more than 230 forest products mills have closed and 180,000 jobs have been lost – 12 % of the industry's national employment – since 2000 when energy prices started to rise. Likewise, many of Illinois' paper and wood manufacturing jobs are endangered by the high price of natural gas.



INCREASING ENERGY PRICES SQUEEZE THE STATE, UNIVERSITIES, AND INDIVIDUAL CONSUMERS:

- In 2003, the State of Illinois spent over \$90 million to purchase electricity, natural gas, coal, steam, propane and fuel oil.
- Illinois' nine public universities are responsible for more than half of all energy consumed by state-owned facilities.
- Home heating costs have risen significantly, regardless of the energy source used. Natural gas accounts for heating 81 % of Illinois homes, followed by electricity (12 %), liquefied petroleum gas (5 %), and fuel oil and other sources (2 %).
- In 2006, Congress and the State provided home heating assistance to more than 360,000 Illinois households, a 16 % increase from 2005.

INCREASING ENERGY PRICES SQUEEZE FARMERS AND AGRICULTURAL INDUSTRIES:

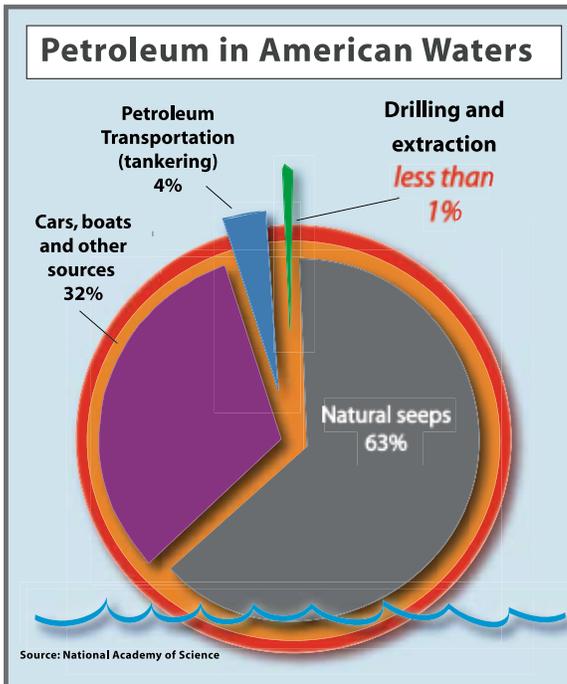
- Illinois is home to more than 72,000 farms, covering more than 27 million acres of land, and generating nearly \$10 billion in farm receipts in 2004. Corn and soybean production alone generate more than \$7 billion in revenue.
- In 2004, Illinois ranked 1st in the nation in soybean production, 2nd in corn production and 10th in winter wheat production.
- Fuel and fertilizer cost per acre for corn, soybeans, and wheat all increased between 2003 and 2006. Corn costs increased from \$26 to \$37 per acre, soybeans from \$10 to \$13 per acre, and wheat from \$15 to \$31 per acre.
- One in every six rows, or 17 %, of the corn grown in Illinois is used to make 40 % of the ethanol consumed in the United States.



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