



NATIONAL  
OCEAN  
INDUSTRIES  
ASSOCIATION

# ENERGY CHALLENGES FOR NEBRASKA 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.**

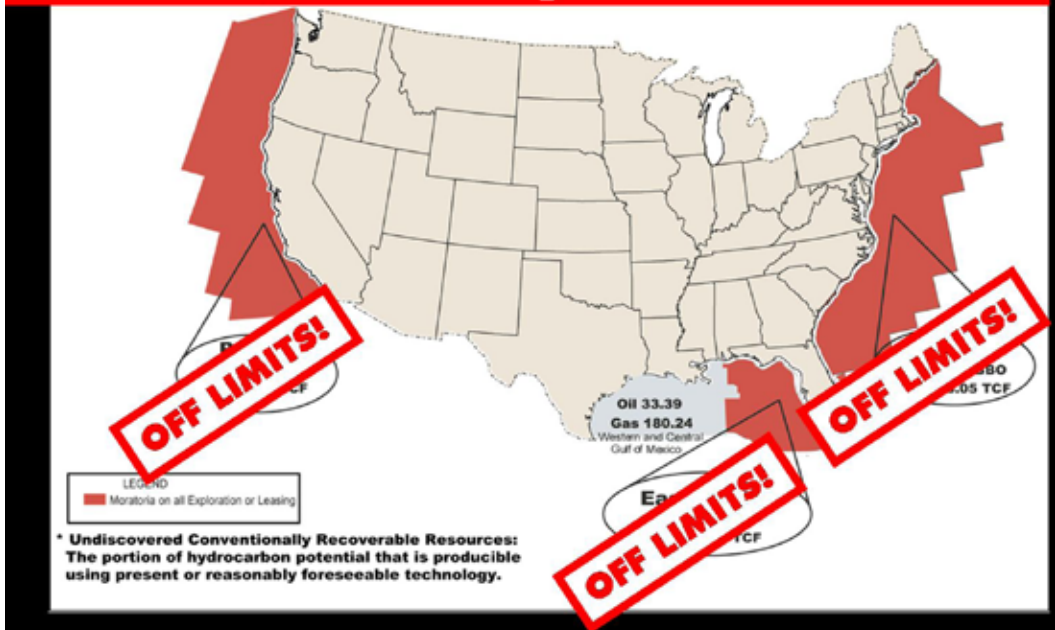
Today, energy prices are on the rise across the nation. This affects individual citizens, industrial consumers, and the agricultural industry. But why is this so?

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



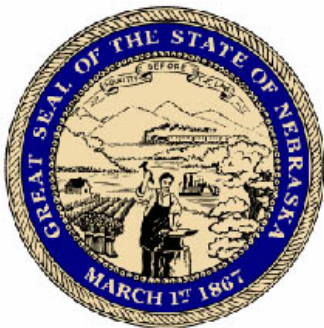
**ENERGY PRICES: A NATIONAL PERSPECTIVE**

- 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.



## NEBRASKA ENERGY CONSUMPTION AND OUTLOOK:

- According to the Nebraska energy Office 2005 Annual report:
  - The state's total energy expenditures increased 2.4 percent in only one year, from 200 to 2001, to \$4.4 billion. Expenditures for petroleum, accounted for 50 percent of the total, and natural gas accounted for 20 percent. According to the government's Energy Information Administration, Nebraskan electricity prices ranked 44<sup>th</sup> in the nation, gasoline was 29<sup>th</sup>, and natural gas ranked 25<sup>th</sup>.
  - Nebraska ranked 36<sup>th</sup> in 2001 in total energy expenditures among the 50 states and the District of Columbia. The state was 18<sup>th</sup> in the rankings of expenditures per person at \$2,567 per year.
  - Between 1996 and 2001, two sources provided 93 percent of the energy used in the commercial sector and 90 percent in the residential sector in Nebraska: natural gas and electricity. More than half the energy used in the residential sector comes from natural gas.
  - The industrial sector relies on more diverse types of fuel than other sectors. Natural gas, electricity, coal, and various petroleum products are the primary energy types utilized in this sector's operations. In four decades, total energy demand in this sector has grown from 93 trillion Btus in 1960 to 182.4 trillion Btus in 2001. Based on past use patterns, increased need for electricity by this sector is likely.
  - The transportation sector in Nebraska is almost exclusively dependent upon petroleum-based fuels. Demand in this sector nearly doubled since 1960, from 94.2 trillion Btus to 162.6 trillion Btus in 2001. Demand for diesel fuel increased more than six-fold in the same period from 8.17 trillion Btus to 50.4 trillion Btus in 2001.
  - More than 90 percent of the fuels used to generate, distribute and transmit electricity come from two resource types: coal and nuclear power. In-state hydropower resources average about five percent a year. Between 2001 and 2001, energy demand by electric utilities increase by 4.4 percent.
- Nebraska is the only state that generates electricity entirely by publicly-owned power systems. As of April 2006, the statewide average price for all sectors from all electric utilities is the fifth-lowest rate in the country, based on figures from EIA. Nationally, electricity costs 51 percent more than it does in Nebraska.
- Nebraska is not an energy rich state. In 2004, oil production in the state was 2.5 million barrels, a decrease of 9 percent from the previous year while natural gas production was 1.49 billion cubic feet, a 1.9 percent increase over the previous year.
- The state ranked 18<sup>th</sup> in installed wind capacity in the country as of January 2006. In 2005, more than 97 million kilowatts – enough for more than 15,000 homes – were generated from 12 operational wind turbines. Energy generated by the turbines is estimated to supply less than one percent of energy consumption in Nebraska, based on 2001 consumption data.
- In 2005, there were 11 operating ethanol plants that produced over half a billion gallons of ethanol, which was 5 percent more than 2004 production. Over 15 percent of Nebraska's corn crop goes into the production of ethanol.



## INCREASING ENERGY PRICES HURT CHEMICAL AND MANUFACTURING INDUSTRIES, IMPERILING NEBRASKA JOBS:

- Enterprises engaged in manufacturing account for 13 percent of the annual gross state product and employ some 103,900 workers.
- In April 2006, Nebraska was home to more than 103,900 manufacturing jobs, paying employees an average of \$35,780/year, 15 percent higher than the state's overall average. Unfortunately, rising energy costs have contributed to the loss of more than 10,400 of these high-wage manufacturing jobs since 2000.
- Chemical manufacturing – which depends on natural gas as a critical input – accounted for more than \$286 million in Nebraska exports in 2005 and support more than 3,900 jobs directly. These manufacturing jobs are also in jeopardy due to the high price of natural gas.
- Nebraska's forest products industry is a vital component of the state's economy, employing nearly 5,800 workers with an annual payroll over \$155 million. Nebraska's paper and wood manufacturing workforce represents more than 4 percent 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:

- In 2004-2005, the University of Nebraska spent \$25.8 million on utility billings. 94 percent of these expenditures go towards energy usage for electricity, natural gas, chilled water and fuel oil commodities. In 2005-2006, the University experienced a 24 percent increase in energy expenditures. Based on this experience, the University of Nebraska expects a \$5.9 million deficit in their operating budget due to higher energy costs. If additional funding is not provided, existing programs will have to be reduced or eliminated to cover these expenses, thus negatively impacting programs and services provided to students and Nebraska residents.
- In a September 2005 business survey by the Bureau of Business Research, 43 percent of Nebraska businesses said reducing energy prices is a high priority for cost reduction. The survey found that about half the businesses indicated transportation costs were the main energy cost driver while almost 40 percent indicated building costs, such as heating, air conditioning, ventilation and lights was the main driver.
- As of January 2006, home heating costs were expected to increase 74 percent in Nebraska's region of the country according to EIA.
- Half of Nebraska's residents' energy bills go to home heating, bills that are only getting bigger. The average energy bill for Nebraska homes heated with natural gas will increase by about \$360 in 2006. Homes heated with heating oil will go up by about \$195. Propane-heated home owners will see their bills rise by about \$150, while electric heating costs will rise by about \$60.





- More than two-thirds (68 percent) of Nebraska's households rely on natural gas heat according to the EIA, with 18 percent of the homes heated by electricity.
- According to the State of Nebraska, the average home heating charge price for delivery of consumer grade propane in Nebraska was \$1.46 per gallon in 2005. For the last three years, propane prices have increased 20 to 30 percent each year. Today, nearly 70,000 Nebraska households (more than ten percent) use propane to heat their homes. Over the last two years, heating oil prices increased over 30 percent each year. Over 8,000 of the state's households use heating oil to heat their homes.
- In 2005, Nebraska distributed over \$19 million in Low Income Home Energy Assistance (LIHEAP) funding to more than 32,500 eligible households to help pay their heating and cooling bills. According to the National Energy Assistance Directors Association, the number of applications in Nebraska needing energy assistance increased by 6,486 - a 24 percent increase in one year - in December 2005.
- Nebraska gasoline prices are currently about 30 percent higher than one year ago. At today's prices, Nebraska households pay about \$3,000 annually for gasoline.

## INCREASING ENERGY PRICES SQUEEZE FARMERS AND AGRICULTURAL INDUSTRIES:

- Nebraska is home to more than 48,000 farms covering more than 45.7 million acres or about 93 percent of the State's total land mass. Agriculture is Nebraska's primary source of wealth and its dominant industry, contributing more than \$12 billion to the economy annually and accounting for 25% of all employment in the state.
- Nebraska's five leading commodities for cash receipts are cattle and calves, corn, soybeans, hogs and wheat.
- Nebraska ranks third nationally in corn grown for grain production. In 2006, state corn growers planted 8.3 million acres, down 2 percent from 2005. Many Nebraska corn farmers rely on irrigation for much of the corn grown and they are very concerned about high energy and fertilizer costs this spring.

One major cost of pumping irrigation water is the cost of energy. There are four energy sources typically used for pumping irrigation water in Nebraska. They are: Diesel, Electricity, Natural Gas, and Liquid Propane (LP). Irrigation season in Nebraska typically lasts from May through September, and some pumps operate 80 percent of the time during dry years.

Nebraska ranked 6<sup>th</sup> nationally in winter wheat production, producing more than 68 million bushels. In 2005, the United States Department of Agriculture's Economic Research Service reports that energy input costs for wheat production accounted for 52 percent of total operating costs in 2004. Unfortunately, because of the high price of energy, fertilizer costs have gone up by double digits, and, for the first time since the Great Depression, a gallon of diesel fuel is more expensive than a bushel of wheat.

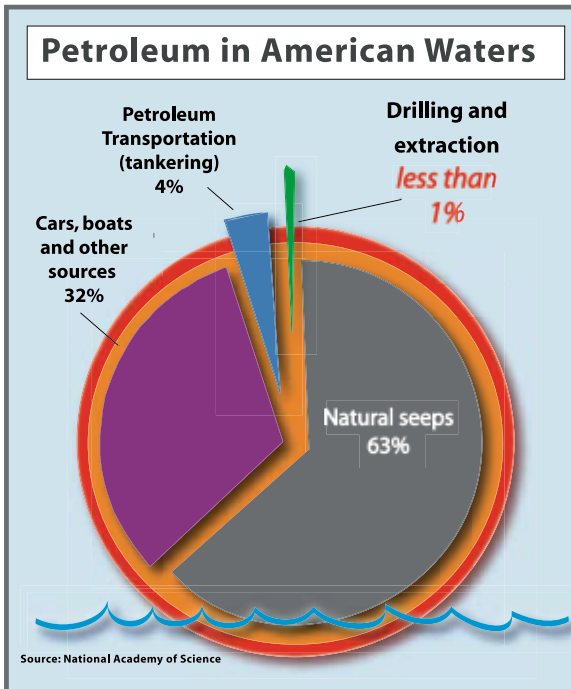
- According to the Food and Agriculture Policy Research Institute, fertilizer costs are up 70 percent and fuel costs are up 113 percent since 2002. From 2005 to 2006, these prices are expected to rise another 10 to 15 percent.



## 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**