



NATIONAL  
OCEAN  
INDUSTRIES  
ASSOCIATION

# ENERGY CHALLENGES FOR NORTH DAKOTA 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.**

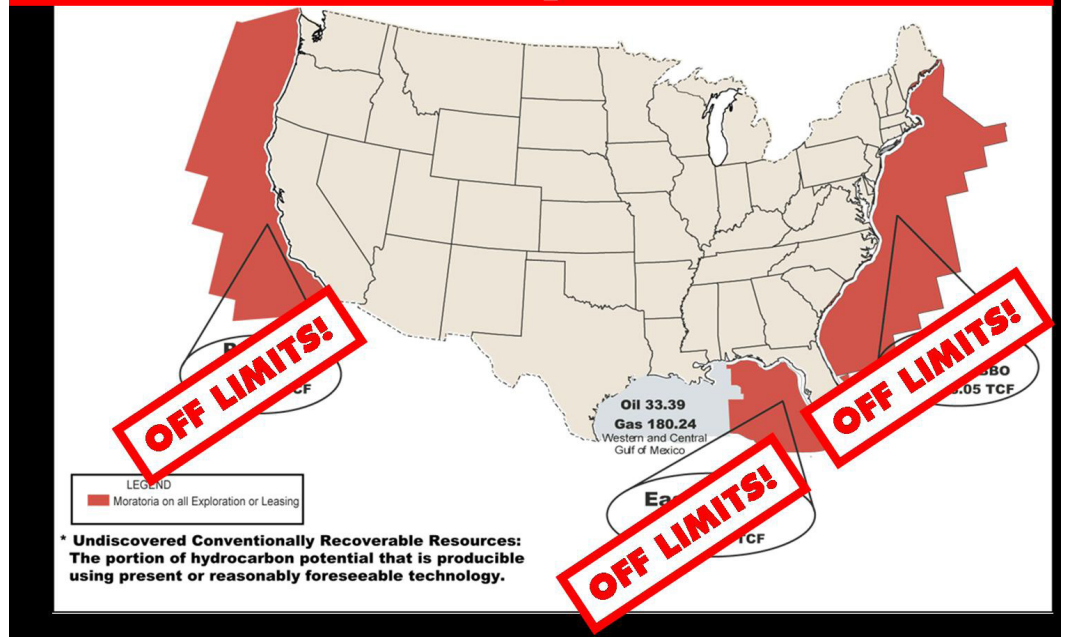
Today, energy prices are on the rise across the nation. This affects individual citizens, industrial consumers, and the agricultural industry. But why is this so?

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**

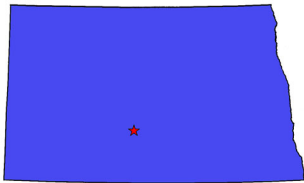
- In the last 25 years, our energy consumption has grown by 30 percent, while supply only increased at half that rate. In just the past decade, as our economy grew, energy consumption increased by more than 12 percent. But our domestic production increased by less than one-half of 1 percent.
- Between 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.

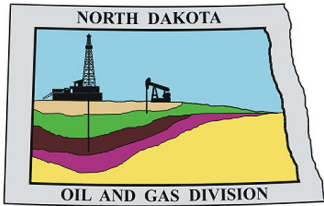


## NORTH DAKOTA ENERGY CONSUMPTION AND ITS ECONOMIC IMPACT:

- In 2002 North Dakota spent more than \$2 billion on energy expenditures, including coal, natural gas, petroleum, and electric power.
- North Dakota ranked 43<sup>rd</sup> nationally in total energy consumption, consuming 407 trillion British thermal units (Btu). In 2001, North Dakota ranked 45<sup>th</sup> in the nation for residential consumption, 46<sup>th</sup> for commercial, 38<sup>th</sup> for industrial, and 46<sup>th</sup> for transportation.
- North Dakota's energy consumption increased by 184 trillion Btu between 1980 and 2001, representing an average annual increase of 2.9 percent.
- In 2001, the state ranked 4<sup>th</sup> in the nation for energy consumption per person, with each person using 640 million Btu.
- The primary sources of electric power in North Dakota are as follows: coal – 96 percent; hydroelectric – less than 4 percent; and, petroleum – less than 1 percent.
- North Dakota electricity consumption increased by 4,633 million kilowatt-hours (kWh) between 1980 and 2001, representing an annual average increase of 3.1 percent.
- North Dakota is rich in fossil fuel resources, producing oil, natural gas and coal. Today, there are 17 counties in the state with commercial oil production. North Dakota is the 9<sup>th</sup> largest oil producing state. The state produced nearly 98,000 barrels of oil per day in 2005, totaling 35.6 million barrels for the year, up 4.5 million barrels from 2004. The state has 389 million barrels of crude oil proved reserves, accounting for more than 2 percent of U.S. crude oil proved reserves.
- The petroleum industry in North Dakota employed approximately 12,900 people in 2005.
- In 2005, North Dakota's natural gas production was 58.1 billion cubic feet (Bcf) while more than 50 Bcf of natural gas was processed in the state. The nine natural gas processing plants processed enough gas in 2005 to heat 447,000 households for one year.
- The state has one petroleum refinery and has a daily capacity of about 60,000 barrels.
- North Dakotan's used over 360 million gallons of gasoline in 2005, and just over 481 million gallons of diesel fuel.
- In 2004, North Dakota had four coal mines producing 29.9 million tons of coal. The state was also the first in the nation to have a coal-gasification plant.
- According to Pacific Northwest Laboratory, North Dakota ranks 1<sup>st</sup> in the nation for the state with the most wind energy resources, more than 1,210 billion kWh.

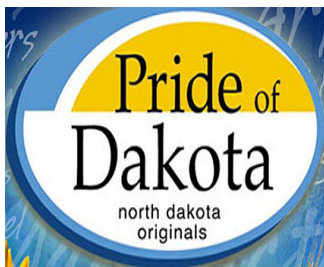
*(Data is drawn from the Department of Energy-Energy Information Administration and the U.S. Census Bureau)*





## INCREASING ENERGY PRICES HURT MANUFACTURING INDUSTRIES, IMPERILING NORTH DAKOTA JOBS:

- As of April 2006, North Dakota was home to more than 26,100 manufacturing jobs, paying employees an average of \$42,760 per year, 44% higher than the average wage and salary for the state. Chemical, plastics and rubber manufacturing – which depend on natural gas as a critical input – accounted for more than \$52 million of North Dakota’s exports in 2005. Unfortunately, these jobs are in jeopardy due to the high price of natural gas.
- Approximately 2 percent of North Dakota is forested, accounting for 7.7 million acres of state’s land area. North Dakota’s forest products industry is a vital component of the state’s economy, employing 2,000 workers with an annual payroll of over \$51 million. North Dakota’s paper and wood manufacturing workforce represents 5.8 percent of the state’s total manufacturing workforce, however, these jobs are also in jeopardy due to the high price of natural gas. Nationally, more than 232 mills have closed and 182,000 jobs have been lost (12 percent of the industry’s national employment) since 2000 when energy prices started to rise.
- Today, energy is the third largest manufacturing cost for the forest products industry (18 percent for pulp and paper mills), growing quickly enough to eclipse employee compensation.



## INCREASING ENERGY PRICES INDIVIDUAL BUSINESSES, SCHOOLS AND CONSUMERS:

- For the fourth consecutive month, North Dakota’s July 2006 Business Condition Index declined: to 57.0 from 62.7 in June and 63.3 in May. Components of the overall index: new orders at 54.5, production at 54.3, delivery lead time at 77.3, employment at 54.5 and inventories at 45.0. Energy prices troubled some businesses. A supply manager commented “deliveries are taking longer as prices escalate on chemicals, welding gases and steel and are up some on remaining commodities.”
- In November 2005, North Dakota Governor John Hoeven outlined a series of measures to help North Dakota families and schools address high energy costs, including maintaining direct assistance for home heating fuel purchases, energy efficiency assistance, and low interest loans for schools facing high energy and transportation costs due to the increased cost of fuel.
- In December 2005, the Killdeer School District in western North Dakota considered going to a four-day school week, triggered in part by higher fuel costs.
- About 43 percent of the homes in North Dakota are heated with natural gas, followed by 29 percent by electricity.
- Over half of North Dakota’s residents energy bills go to home heating, bills that are only getting bigger. The average energy bill for North Dakota homes heated using natural gas will increase by about \$465 in 2006. Homes heated with heating oil will go up by about \$320. Propane-heated homes will rise by about \$240, while electric heating costs will increase by about \$85.



- In 2005, an estimated 15,800 households throughout North Dakota received more than \$17.2 million in Low Income Home Energy Assistance (LIHEAP) funding to help pay their heating and cooling bills.
- North Dakota gasoline prices are currently around 30 percent higher than one year ago. At today's prices, North Dakota households pay about \$3,100 annually for gasoline.



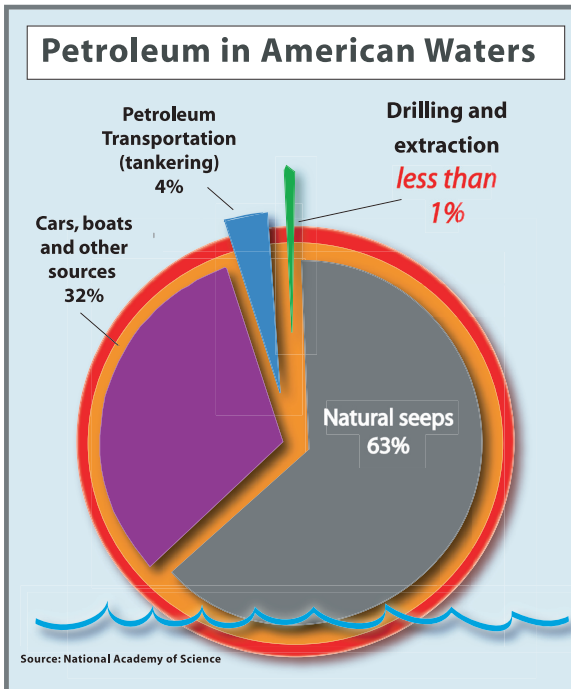
## **INCREASING ENERGY PRICES SQUEEZE FARMERS AND AGRICULTURAL INDUSTRIES:**

- North Dakota is home to more than 30,300 farms and ranches, covering more than 39.4 million acres of farmland with cash receipts in 2004 totaling more than \$4 billion from the sale of all agricultural commodities. Agriculture is North Dakota's number-one industry. North Dakota farmers and ranchers produce enough beef to make 113 million hamburgers, enough wheat for 14.3 billion loaves of bread, and enough durum wheat for 13.7 billion servings of spaghetti. Along with ag-related businesses, agriculture makes up 37% of the state's economy.
- North Dakota is the largest spring wheat producing state in the nation and accounts for approximately \$750 million or 21 percent of the state's total cash receipts. 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. For wheat farmers, this dramatic rise in prices is especially acute because more than half the variable cost associated with growing it comes from fuel and fertilizer. In 2006, it will cost 24 to 27 percent more to grow wheat than in 2005.
- Cattle and calves was the state's second largest commodity, with 15.6 percent of the total cash receipts. Increasing energy costs – in the form of higher prices for transportation, electricity and related costs in the feed and ingredient processing industries – result in dramatic changes in the feed and cattle industries. Furthermore, corn, the most popular feed grain, requires large amounts of nitrogen fertilizer and irrigation water which are both sensitive to energy costs.
- According to North Dakota State University, the impact of higher energy prices on North Dakota producers will substantially reduce net farm income. Net farm income for the state was estimated in May 2005 at \$26,293. By August 2005, the estimated net farm income was \$6,387, a decrease of \$19,906 due to increased fuel and fertilizer expenses. In 2004, the state's average fuel expense was 7.3 percent, but by August 2005, that had increased to 12.9 percent. The fertilizer expense share increased 5.9 percent for the state.
- In 2004, North Dakota farmers consumed more than 855 thousand tons of fertilizer and plant nutrients throughout the state.
- From 2001 to 2006, the price of diesel fuel increased 113 percent, thus impacting farm machinery costs.

## 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**