



**NATIONAL
OCEAN
INDUSTRIES
ASSOCIATION**

ENERGY CHALLENGES FOR SOUTH 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.

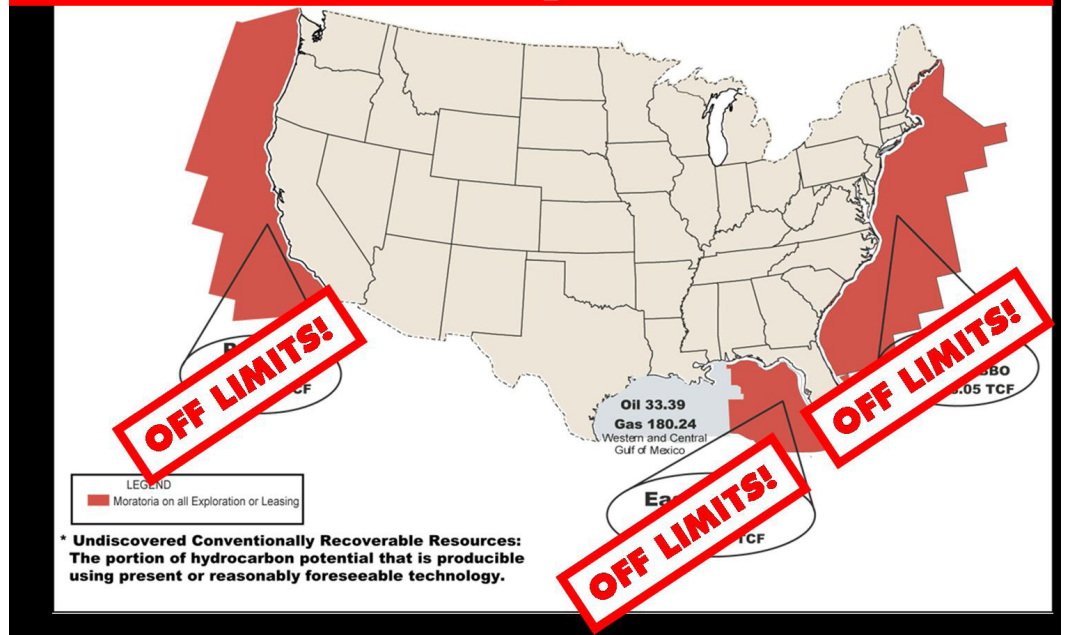
Today, energy prices are on the rise across the nation. This affects individual citizens, industrial consumers, and the agricultural industry. But why is this so?

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.

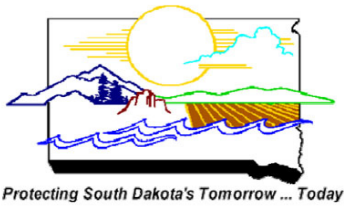


SOUTH DAKOTA ENERGY CONSUMPTION AND ITS ECONOMIC IMPACT:

- In 2002, South Dakota spent more than \$1.88 billion on energy expenditures, including coal, natural gas, petroleum, and electric power.
- South Dakota ranked 48th nationally in total energy consumption, consuming 248 trillion British thermal units (Btu). In 2001, South Dakota ranked 46th in the nation for residential consumption, 49th for commercial, 48th for industrial, and 47th for transportation.
- South Dakota's energy consumption increased by 57 trillion Btu between 1980 and 2001, representing an average annual increase of 1.2 percent.
- In 2001, the state ranked 28th in the nation for energy consumption per person, with each person using 327 million Btu.
- The primary sources of electric power in South Dakota are as follows: coal – 49 percent; hydroelectric – 45 percent; natural gas – 6 percent; and petroleum – 1 percent.
- South Dakota electricity consumption increased by 3,543 million kilowatt-hours (kWh) between 1980 and 2001, representing an annual average increase of 2.6 percent.
- In 2004, South Dakota's crude oil production totaled 4,000 barrels a day from 148 producing oil wells, ranking them 25th out of 31 producing states. The state's crude oil proved reserves account for less than 1 percent of U.S. crude oil proved reserves.
- South Dakotan's used over 1.2 million gallons of gasoline per day in 2002.
- According to Pacific Northwest Laboratory, South Dakota ranks 4th in the nation for the state with the most wind energy resources, more than 1,030 billion kWh.
- South Dakota produces more than 10 percent of all the ethanol in the nation, growing by 13 times from 35 million gallons in 2000 to 400 million gallons in 2004. It is estimated that the state's production will top 675 million gallons by 2007. According to a recent ethanol study, the total economic activity created by the production of ethanol in South Dakota amounts to more than \$1 billion.

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





INCREASING ENERGY PRICES HURT MANUFACTURING INDUSTRIES, IMPERILING SOUTH DAKOTA JOBS:

- As of April 2006, South Dakota was home to more than 41,800 manufacturing jobs, paying employees an average of \$33,520 year, 20 percent 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 \$14 million in South Dakota's exports in 2005. Unfortunately, these jobs are also in jeopardy due to the high price of natural gas.
- Approximately 3 percent of South Dakota is forested, accounting for 1.6 million acres of state's land area. South Dakota's forest products industry is a vital component of the state's economy, employing 4,700 workers with an annual payroll of over \$138 million. South Dakota's paper and wood manufacturing workforce represents 3.3 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 SQUEEZE SCHOOLS AND CONSUMERS:

- In 2006, the South Dakota Board of Regents agreed to increase the 2008 budget request by more than \$14 million over the 2007 budget. Included in the Regents request was an adjustment for ever-growing utility costs.
- Today, about one in 10 South Dakota school districts has a four-day school week, but Custer, South Dakota was among the first. Custer District, with around 1,000 students cut Friday's from the school calendar, allowing the district to save about \$50,000 to \$75,000 a year in busing, fuel, staff and utility costs.
- Approximately 48 percent of the homes in South Dakota are heated with natural gas, followed by 22 percent by propane.
- About half of South Dakota's residents energy bills go to home heating, bills that are only getting bigger. The average energy bill for South Dakota homes heated using natural gas will increase by about \$425 in 2006. Homes heated with heating oil will go up by about \$250. Propane-heated homes will rise by about \$190, while electric heating costs will increase by



about \$75.



- In 2005, an estimated 18,200 households throughout South Dakota received more than \$14.1 million in Low Income Home Energy Assistance (LIHEAP) funding to help pay their heating and cooling bills.
- South Dakota gasoline prices are currently around 25 percent higher than one year ago. At today's prices, South Dakota households pay about \$3,050 annually for gasoline.

INCREASING ENERGY PRICES SQUEEZE FARMERS AND AGRICULTURAL INDUSTRIES:

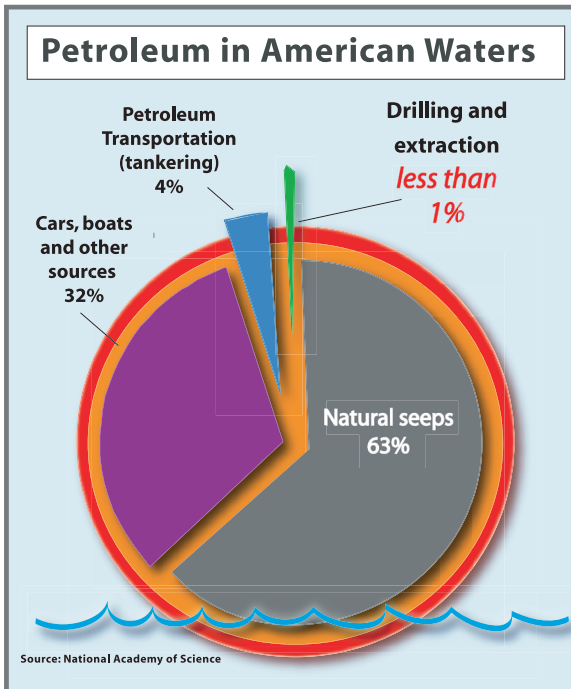
- South Dakota is home to more than 31,400 farms and ranches, covering over 43.7 million acres of farmland. In 2004, the farm economy produced cash receipts of more than \$4.8 billion. Crops generated \$2.4 billion, or 47.5 percent of total cash receipts, and livestock generated \$2.4 billion, or 46 percent of cash receipts.
- South Dakota ranks fourth nationally in other spring wheat production and sixth in all wheat production, accounting for approximately \$480 million of the state's 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.
- The cattle industry in South Dakota is a family business with approximately 17,000 ranchers and cattlemen, with nearly all of the cattle businesses having been in the same families for more than 25 years. The state ranks sixth nationally in all cattle and calves, accounting for 34 percent of its 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 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