



NATIONAL
OCEAN
INDUSTRIES
ASSOCIATION

ENERGY CHALLENGES FOR OKLAHOMA 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.

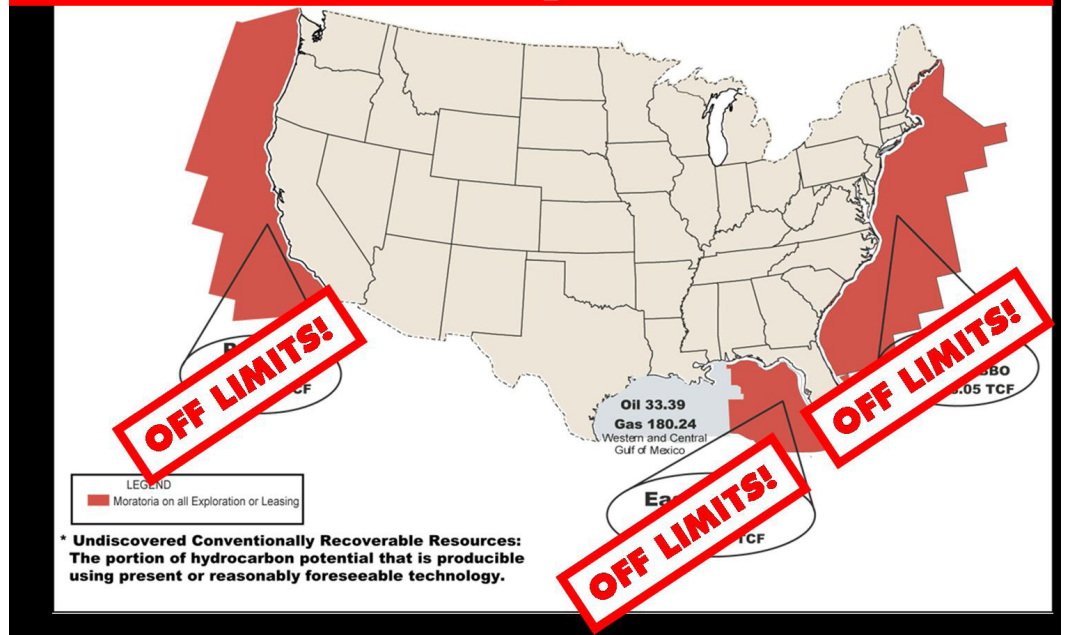
Today, energy prices are on the rise across the nation. This affects individual citizens, industrial consumers, and the agricultural industry. But why is this so?

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.



OKLAHOMA ENERGY CONSUMPTION AND ITS ECONOMIC IMPACT:

- In 2003, residential, commercial, industrial, and transportation users in Oklahoma spent an estimated \$11.7 billion on direct energy use, roughly 38 percent more than the \$8.5 billion spent in 1999.
- Oklahoma is ranked 24th nationally in total energy consumption, consuming 1.5 quadrillion British thermal units (Btu). In 2001, Oklahoma ranked 27th in the nation for residential consumption, 27th for commercial, 20th for industrial, and 20th for transportation.
- In 2001, the state ranked 8th in the nation for energy consumption per person, with each person using 444 million Btu.
- The primary sources of electric power in Oklahoma are as follows: coal – 55.7 percent; natural gas – 38.3 percent; hydroelectric – 4.9 percent, and renewables – 1.1 percent.
- Oklahoma is rich in fossil fuel resources, producing oil, natural gas and coal. Today, 71 of the state's 77 counties have oil or gas production. Oklahoma is a leading crude oil producing state, ranked 6th in the nation with production totaling 171 thousand barrels per day. The state has 570 million barrels of crude oil proved reserves which accounts for 3 percent of U.S. crude oil proved reserves.
- In 2004, Oklahoma ranked 2nd in the nation in marketed production of natural gas. Oklahoma's natural gas production was 1.6 trillion cubic feet (Tcf), down 31 percent from 2.2 Tcf in 1990. Oklahoma's share of the natural gas market has dropped from more than 12 percent in the early 1990's to 8 percent last year. Oklahoma has two of the top 10 recoverable natural gas basins in the lower 48 states with 16.7 Tcf of potential gas reserves, representing nearly 9 percent of the lower 48 states.
- The state's five petroleum refineries have a combined distillation capacity totaling about 485 thousand barrels per day.
- Oklahomans consume 4.9 million gallons of gasoline per day, ranking them 27th in the nation.
- In 2004, Oklahoma had eight coal mines producing 1.7 million tons of coal, an increase of 14.5 percent from 2003.
- Oklahoma Gas and Electric's wind power program is one of the largest in the country boasting 50 megawatts of power. By 2007, OG&E plans to have 170 megawatts of electricity generated by wind on its system. That will be enough electricity to power about 51,000 homes.

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

INCREASING ENERGY PRICES HURT MANUFACTURING INDUSTRIES, IMPERILING OKLAHOMA JOBS:

- As of April 2006, Oklahoma was home to more than 146,900 manufacturing jobs, paying employees an average of \$38,650/year, 26% higher than the average wage and salary for the state. Unfortunately, rising energy costs have contributed to the loss of more than 30,600 of these high-wage manufacturing jobs since 2000.
- In order to decrease energy costs, General Motor's Oklahoma City assembly plant, in October 2004, became the fifth GM facility to start using landfill gas as a boiler fuel.
- Chemical, plastics and rubber manufacturing – which depend on natural gas as a critical input – accounted for more than \$487 million of Oklahoma's exports in 2005 and supported more than 2,900 jobs directly. These jobs are also in jeopardy due to the high price of natural gas.
- Approximately 17 percent of Oklahoma is forested, accounting for 7.7 million acres of the state's land area. Oklahoma's forest products industry is a vital component of the state's economy, employing 11,000 workers with an annual payroll of over \$327 million. Oklahoma's paper and wood manufacturing workforce represents 4.3 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 INDIVIDUAL CONSUMERS AND SCHOOLS:

- In order to decrease energy usage, Tulsa Public Schools moved their school start date from August 19 to the day after Labor Day and saved approximately \$500,000 through reduced utility costs.
- About 60 percent of the homes in Oklahoma are heated with natural gas, followed by 26 percent by electricity.
- Approximately 35 percent of Oklahoma's energy bills go to heating the home, bills that are only getting bigger. The average energy bill for Oklahoma homes heated using natural gas will increase by about \$230 in 2006. Homes heated with heating oil will go up by about \$190. Propane-heated homes will rise by about \$145, while electric heating costs will increase by approximately \$70.
- In 2005, an estimated 93,144 households throughout Oklahoma received more than \$16.1 million in Low Income Home Energy Assistance (LIHEAP) funding to help pay their heating and cooling bills.
- According to the National Energy Assistance Director's Association, Oklahoma reported a 25 percent increase last year in the number of households receiving heating assistance.
- Oklahoma's gasoline prices are currently around 30 percent higher than one year ago. At today's prices, Oklahoma households pay about \$3,600 annually for gasoline.





INCREASING ENERGY PRICES SQUEEZE FARMERS AND AGRICULTURAL INDUSTRIES:

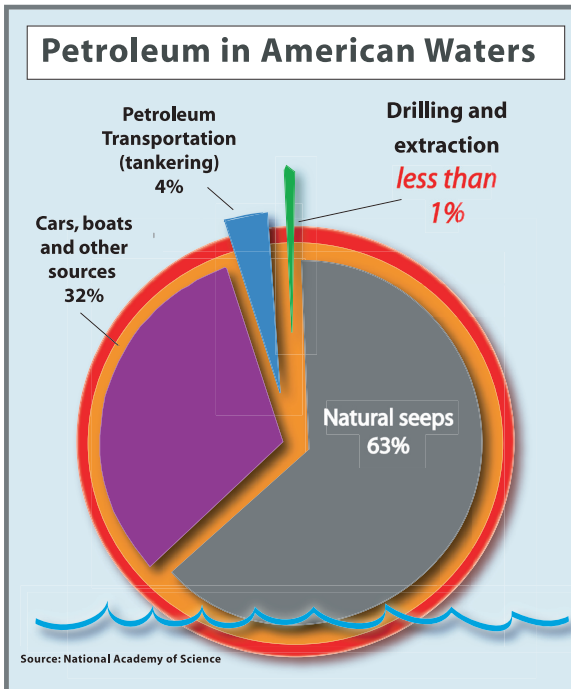
- Oklahoma is home to more than 83,500 farms, covering more than 33.7 million acres of farmland.
- Oklahoma's cash receipts in 2004 totaled more than \$5 billion from the sale of all agricultural commodities.
- Oklahoma is the third largest beef producing state, accounting for about \$2 billion of the state's annual agricultural cash receipts. Increasing energy costs – in the form of higher prices for transportation, electricity and related costs in the feed and ingredient processing industries – has resulted 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.
- Poultry and eggs rank in the top three among Oklahoma's most valuable commodities. In 2003, poultry and eggs ranked second in Oklahoma and 19th nationally, with cash receipts at \$453 million. One of the largest, if not the largest, operating expenses for poultry growers is the cost of electricity. With more electrical equipment in the chicken houses including computers, ventilation fans, automatic feeders and waterers, and lights, the electric bill keeps getting higher and higher.
- The top cash crop of Oklahoma is hard red winter wheat which ranks 2nd nationally in winter wheat production. Hard red winter wheat is grown on over 6 million acres of the state's farmland and in 2003, more than 179 million bushels of wheat were produced totaling more than \$583 million. 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 energy 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.
- 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