



NATIONAL
OCEAN
INDUSTRIES
ASSOCIATION

ENERGY CHALLENGES FOR MISSISSIPPI 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*
- 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.



MISSISSIPPI ENERGY CONSUMPTION:

- Mississippi spends over \$8 billion each year on energy, ranking 28th nationally in total energy consumption.
- In 2003, Mississippi's energy consumption by sector was: 35% industrial, 31% transportation, 20% residential and 14% commercial.
- Between 1980 and 2001, Mississippi's electricity consumption increased by 21 billion kilowatt-hours, averaging a 3.1% increase year-over-year.
- Coal generation fuels 39% of Mississippi's electricity generation, followed by natural gas (30%), nuclear (21%), and petroleum (10%).
- Natural gas demand in the East South Central Census Region – Alabama, Kentucky, Mississippi, and Tennessee – will remain high, increasing by 3% from 2.19 Bcf per day in 2007 to 2.26 Bcf per day in 2008.

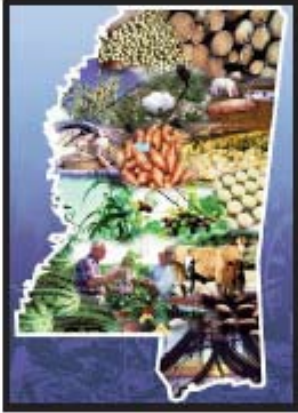
MISSISSIPPI ENERGY RESOURCES AND PRODUCTION:

- Currently, the State ranks 12th nationally in the production of liquid hydrocarbons, with more than 4,700 oil and gas wells producing more than 17 million barrels of oil and nearly 190 billion cubic feet of natural gas annually. The State has an estimated 189 million barrels of crude oil reserves.
- Oil and gas fields are found primarily in the southern half of the State, including those onshore and offshore along the Gulf Coast, but new deposits have recently been discovered in the Black Warrior Basin in the northern half of the State.
- The State has four oil refineries, which together account for 2% of total U.S. refining capacity.
- Mississippi has one of the nation's largest natural gas processing plants in Pascagoula, but the State still purchases more than half of its natural gas from neighboring states. This is due to high demand from the State's utility and industrial sectors.
- The majority of Mississippi's coal-fired power plants are fueled by coal shipped from Colorado.
- In Mississippi, rail is often the only viable mode of transportation for coal, yet, equally often, there is no choice among rail carriers. Accordingly, rail freight costs have soared from \$1.9 million in 2000 to \$20.1 million in 2005, accounting for much of the observed increase in electric prices.
- Mississippi has one coal mine, located in Choctaw County, supplying lignite coal to a power-plant using clean-coal technology.
- The reactor at the Grand Gulf Nuclear Power Station in southwestern Mississippi supplies about one-fifth of the State's electricity.



MISSISSIPPI ALTERNATIVE / RENEWABLE ENERGY:

- Today, biomass is estimated to satisfy approximately 7% of Mississippi's total energy consumption, a portion that is twice the national average.
- Mississippi produces a small amount of electricity from a wood-fired power plant



in the eastern part of the State.

- In October 2006, the first plant in the southeast solely dedicated to ethanol production was being developed in Mississippi.
- The State will also be home to a major biodiesel facility using ordinary plant products as feedstock.

INCREASING ENERGY PRICES HURT MANUFACTURING INDUSTRIES, IMPERILING MISSISSIPPI JOBS:

- Mississippi's manufacturing sector is one of the State's largest industries.
- As of November 2006, Mississippi was home to approximately 175,000 manufacturing jobs, paying employees an average of \$34,500 per year, 18% higher than the average for the State. Rising energy costs, however, have contributed to the loss of more than 48,000 of these high-wage manufacturing jobs since 2000.
- Chemical manufacturing – which depends on natural gas as a critical input – accounted for \$700 million in Mississippi exports and directly supported nearly 7,000 jobs in 2005. These jobs, however, are in jeopardy due to the high price of natural gas.
- Mississippi has more than 18 million acres of forested land, and its forest products industry employs approximately 25,000 workers with an annual payroll exceeding \$1 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 – 12% of the industry's national employment – have been lost since 2000 when energy prices started to rise. Likewise, many of Mississippi's paper and wood manufacturing jobs are endangered by the high price of natural gas.

INCREASING ENERGY PRICES SQUEEZE THE STATE'S UNIVERSITIES AND INDIVIDUAL CONSUMERS:

- The Mississippi Board of Trustees of State Institutions of Higher Learning has recommended system-wide increases in tuition and campus housing and is currently considering a system-wide utility surcharge. At Mississippi State University, this means a 7% tuition and 8.5% campus housing increase as the University continues to contend with a 30% increase in energy bills over two years, despite the implementation of an aggressive energy conservation plan.
- The typical Mississippi family spends \$1,300 annually on their home utility bills, often amounting to their second highest expense after their mortgage payment.
- Home heating costs have risen significantly, regardless of the energy source used. Electricity accounts for heating 40% of Mississippi's homes, followed by natural gas (37%), liquefied petroleum gas (21%), and other sources (2%).

- In 2006, Congress and the State provided home heating assistance to more than 61,000 Mississippi households and cooling assistance to 34,000 households, a 15% increase from 2005.

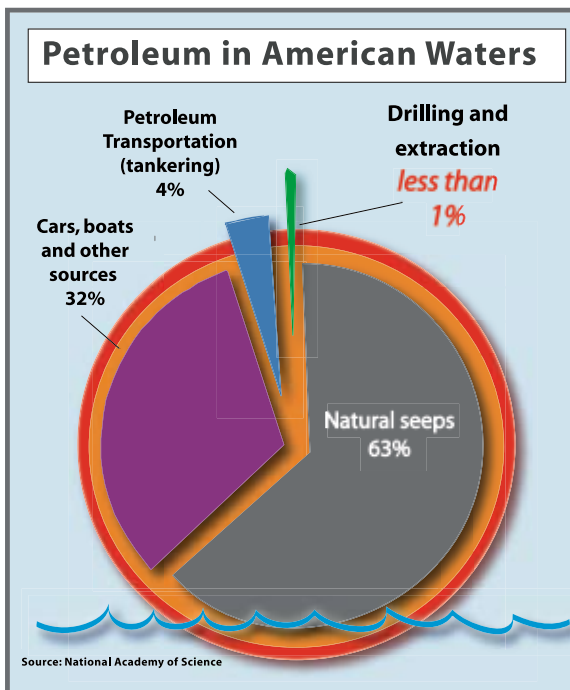
INCREASING ENERGY PRICES SQUEEZE FARMERS AND AGRICULTURAL INDUSTRIES:

- Agriculture is Mississippi's number one industry, employing approximately 30% of the State's workforce either directly or indirectly.
- Mississippi is home to more than 42,000 farms, covering more than 11 million acres, and generating more than \$4 billion in farm receipts in 2005. The two top agricultural products in the State are broilers (\$2 billion) and cotton (\$510 million).
- One of the largest operating expenses for poultry growers is the cost of electricity, depleting gross revenues by approximately 20%. With more electrical equipment in the chicken houses, including computers, ventilation fans, lights, and automatic feeders and waterers, electric bills are only getting higher.
- In 2004, per acre energy input costs for cotton were at \$64. This was among the highest of major field crops and made up one-fifth of the total operating costs of cotton production.
- According to a Mississippi State University study, a 25% increase in energy costs results in a \$9 per acre cost increase.
- Agricultural production uses energy directly in grain production, drying, and marketing, and indirectly through many of the purchased inputs such as fertilizer and agricultural chemicals.
- The Economic Research Service of the United States Department of Agriculture estimates that principal crop related expenses in 2007 – seed, fertilizers, and pesticides – are forecast to be \$36.1 billion, up 5% from 2006. This would be the fourth straight increase of \$1.8 billion or more.

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