

## Picture 'not pretty' for future agricultural energy costs

*Nuclear power is still the cheapest source for agriculture.*

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In the past 12 months farmers have been confronted with major price increases for gasoline, diesel fuel, natural gas, electricity, fertilizer, chemicals — virtually anything that has a petroleum/energy component.

As if that weren't bad enough, the likelihood is that energy costs will continue to rise as demand increases worldwide.

"Predictions are that there will be substantial increases for at least the next 10 years," Billy Thornton, director of regulatory affairs for Mississippi Power Company, said at the annual conference of the Mississippi Agricultural Economics Association at Mississippi State University. "It's not a pretty picture.

"We just don't see any significant reductions" for oil or natural gas, he said, noting that natural gas prices this past winter were "the highest ever." Natural gas is the primary feedstock for nitrogen fertilizers, which has pushed prices into the stratosphere and forced many U.S. operations to mothball their plants.

Stiff increases were also seen for butane and propane, widely used for heating poultry houses and greenhouses and for other agricultural purposes.

"We've seen crude oil prices in excess of \$70 per barrel, more than \$20 higher than last year," Thornton said. Unlike previous price spikes that were caused by supply interruptions, the oil/energy market is being driven by burgeoning worldwide demand, notably China, which has had an average 9.5 percent economic growth for the past 20 years and is now the world's fourth largest economy.

Any threat to supply, such as Hurricanes Katrina and Rita or uncertainties in the Middle East, can push jittery markets even higher.

While most U.S. electric utility plants can readily switch between fuels used for generation — whichever is cheapest, be it natural gas, oil, or coal — switching opportunities have been reduced, Thornton said, as natural gas and coal prices have moved upward in concert with oil.

"In the lower 48 states, natural gas production is declining, despite record gas rig activity, which means we'll have to rely more on supplies from Canada.

"Coal prices were basically flat for many years, averaging about \$25 a ton as recently as 2000, but with oil and natural gas prices rising, coal hit a peak of \$70 per ton in 2005. A lot of smaller mines are opening back up because of the increase in demand and price."

Coal costs are further affected by higher rail transportation costs. "No new rail lines are being built; no new trains are being manufactured."

Mississippi has vast deposits of lignite, often referred to as "brown coal," which could be used for generating electricity.

Mississippi Power and its parent Southern Company are “spending millions each year” looking at alternative energy sources such as solar and biomass, he said.

There is also potential to use more imported liquefied natural gas (LNG), Thornton said, but even though there is a large worldwide supply, at present there are only six facilities in the United States to process the product.

“Two companies are now trying to get approval for LNG facilities on the Gulf Coast,” but the permitting and construction process could be lengthy.

The Southern Company is spending \$5 billion per year on fossil fuels for generating electricity, Thornton said. “About 50 percent of our cost per kilowatt hour is for fuel.”

**Given the run-up in prices for conventional energy, is there potential for a resurgence of nuclear generating plants, he was asked. “Absolutely. It’s still the cheapest power source.”**

The Southern Company is part of a consortium now seeking a location for an additional nuclear plant in its southeast states territory. The Grand Gulf nuclear plant near Port Gibson, Miss., could be expanded, Thornton said, “but even if the permitting process started today, it’d be 2015 before the first kilowatt hour was generated.”

The Tennessee Valley Authority, which covers several southern states, has mothballed plants that “could be brought back on line rather quickly.”

As farmers look for every way possible to cope with rising energy costs, Thornton noted that most electric utility companies “have representatives who understand agriculture and energy and are available to help farmers be more productive. You shouldn’t hesitate to call on them for assistance.”