

Florida's Increased Reliance on Natural Gas

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The United States is currently the largest single consumer of energy. Natural gas accounts for approximately 25 percent of the total energy consumed in the United States. As one of the fastest growing states in the country, Florida's natural gas needs are expected to more than double in the next decade, and with it, an obvious increased and possible costly reliance on natural gas.

Why natural gas versus other fuels such as coal and nuclear that are relied on more by other countries?

Natural gas (largely methane) is the fuel of choice because it is clean, efficient, flexible and plentiful. Natural gas is the cleanest-burning fossil fuel (45% less carbon dioxide emitted than coal and 30% less than oil). Besides being more environmentally friendly than coal or oil, natural gas is also more economical than electricity; can be used as a fuel for vehicles; burns cleaner than gasoline or diesel; can be used for heating, cooking, hot water, clothes dryer, backup generator power, and so forth; can be easily transported via pipelines; and is in abundant supply in the United States.

However, a new study commissioned by the Florida Public Service Commission and released by the University of Florida's Public Utility Research Center dated September 22, 2011, states that Florida's high electric rates are due to a heavy reliance on natural gas, with Florida's rates being at least 10 percent higher than surrounding states.

Currently, there are five main groups of natural gas users.

- Residential users: use natural gas in their homes to fuel furnaces and appliances such as stoves, water heaters and clothes dryers.
- Commercial users: use natural gas in businesses such as restaurants, hotels, and hospitals.
- Industrial users: use natural gas for heating processes and as fuel for the generation of steam.
- Electric utilities: use natural gas to generate electricity.

- Natural gas pipeline companies: use natural gas as a fuel to run compressor units.

While fuel diversity, in terms of a balance of energy generation from coal, nuclear, natural gas, oil and other sources to generate electricity has been a goal among Florida's electric companies, natural gas has remained the most utilized in Florida with over 90 percent of new generating capacity constructed in Florida being natural gas-fired.



However, as more natural gas plants were constructed throughout the United States, gas prices increased dramatically. In turn, with the extensive time requirements needed to construct coal plants, the result has been increased natural gas consumption and a depletion of natural gas supplies, which in turn raised gas prices. Florida's decision to increase its reliance on natural gas to produce electricity has resulted in the state having the highest energy prices in the region, according to the above referenced University of Florida study. "Florida, compared to other states in the region, relies greatly on natural gas which has been more prone to price fluctuations than coal, which is typically purchased under longer-term contracts, or nuclear, which has high capital (construction) costs but low operating costs."

Uranium and coal, which once supplied 60% of Florida's electricity (1990) now generates only 40% of Florida's

electricity, with Florida becoming increasingly reliant on natural gas, which by 2009 has generated over 50% of Florida's electricity. This shift to natural gas has benefitted Florida by diversifying its generation portfolio; however, it has also occurred at a time when natural gas prices in the region are increasing. As such, Florida's increased reliance on natural gas can be seen as both a positive and a negative for Florida's future.

In conclusion, Florida's economy and population is one of the fastest growing in the United States. As a result, Florida's demand for energy is increasing at an exponential rate. This increased demand for energy compounded with the instability of energy prices can have a significant impact on the sustainability of Florida's future expansion. As discussed in the University of Florida study, choosing how to generate electricity is complicated and subject to great uncertainty and are long term decisions that have to take into consideration many variables. "Utilities cannot change their technology decisions as economic and political conditions change."

As such, Florida's increased reliance on natural gas will not likely dissipate anytime soon. With that said, Florida must continue to look at both short and long terms solutions to diversifying its energy consumption to ensure it is prepared for any energy crisis that may be on the horizon and should continue to look at both short and long term goals to improving its energy efficiency and conservation. ■

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