

McCULLOUGH RESEARCH

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To: McCullough Research Clients

From: Robert McCullough and Chris May, McCullough Research;
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Subject: Lowering Florida's Electricity Prices

The Florida Public Service Commission (PSC) recently requested information regarding Florida electricity prices and how they may impact Florida businesses. In response to this request, the PSC received and has circulated a new report by the Public Utility Research Center (PURC). "Addressing the Level of Florida's Electricity Prices"¹ concludes that "Florida's customers' costs for electricity appear to be higher on average than costs in neighboring states. The difference is most pronounced for residential consumers, but the general pattern holds for business customers as well." The PURC report also concludes that "...decisions about how to generate electricity are long term decisions and so have to take into consideration many variables....But utilities cannot change their technology decisions as economic and political conditions change, so they and their customers will sometimes like the outcomes of their decisions and sometimes not."

Because the data in the PURC report ends at 2008, there is no discussion of the dramatic changes experienced by Florida's electric utility industry and natural gas sector over the last 24–36 months. These cataclysmic and in some cases irreversible changes are having a beneficial impact on Florida's energy choices, i.e. how utilities fuel their generation fleet and how policy-makers select future utility-scale power plant technologies. We have prepared this memo to complete the story through 2011 and to suggest ways that lead to meaningful advances in utility regulation as well as lowering the price of electricity in Florida.

¹ http://warrington.ufl.edu/purc/docs/Kury_Addresssing_the_Level.pdf, September 28, 2011.

Lowering Florida's Electricity Prices

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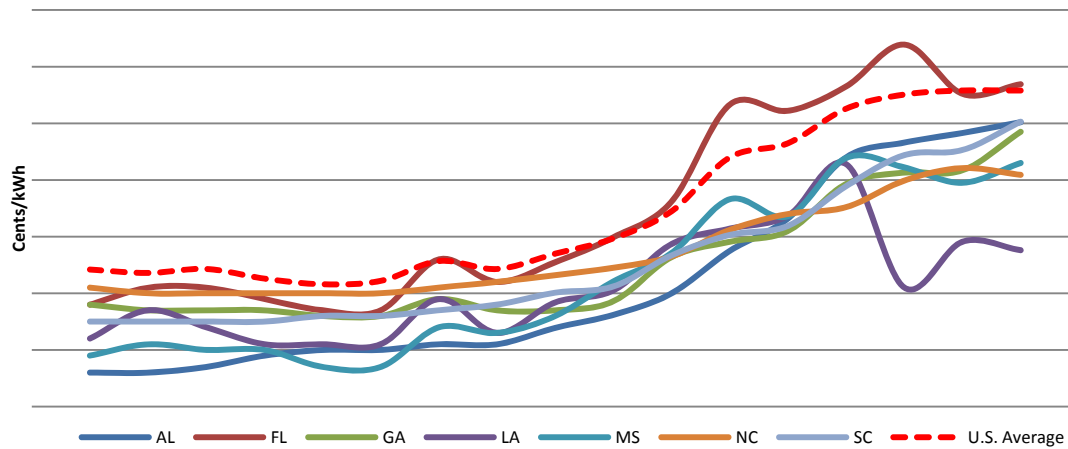
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Is the price of electricity too high in Florida?

The two graphs below show the average price of electricity for residential and commercial consumers in the seven southeastern states in the PURC report. We use the monthly data collected, compiled, and updated by the U.S. federal government.

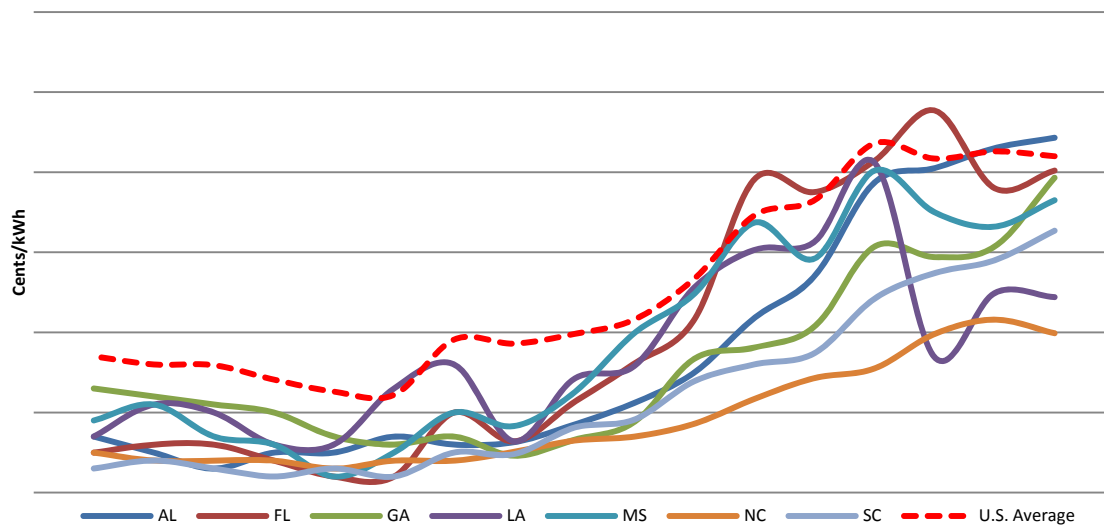
Average Electricity Price: Residential Consumers

Source: EIA Electric Power Monthly Table 5.6b



Average Electricity Price: Commercial Consumers

Source: EIA Electric Power Monthly Table 5.6b



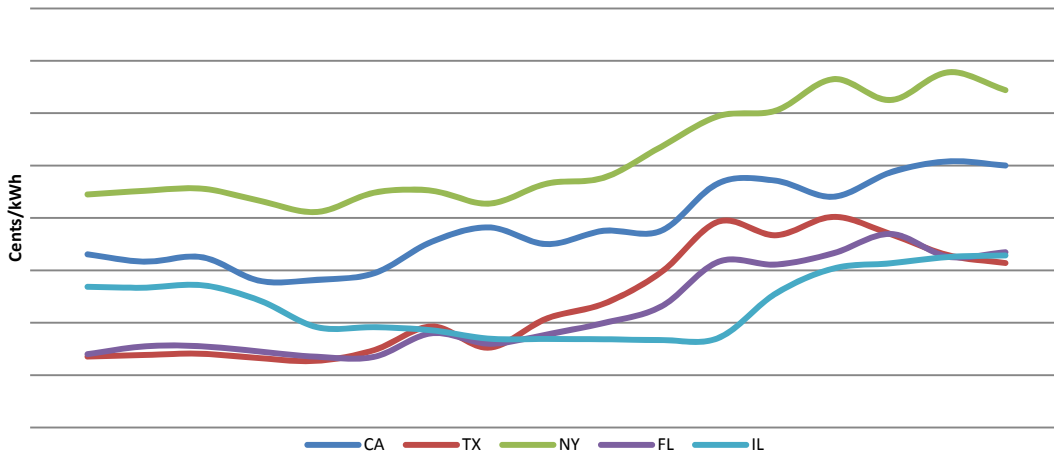
From these graphs we can see that Florida electric rates are about 110% of the seven-state, southeastern region-wide average. We note that a state's geographic location is not the only factor in the determination of electric rates, for population is also important. Florida is the fourth-largest U.S. state by population (regarding the seven southeastern states, Florida at 18.9 million is roughly 94% larger than Georgia at 9.7 million).²

State	Population
California	37,341,989
Texas	25,268,418
New York	19,421,055
Florida	18,900,773
Illinois	12,864,380

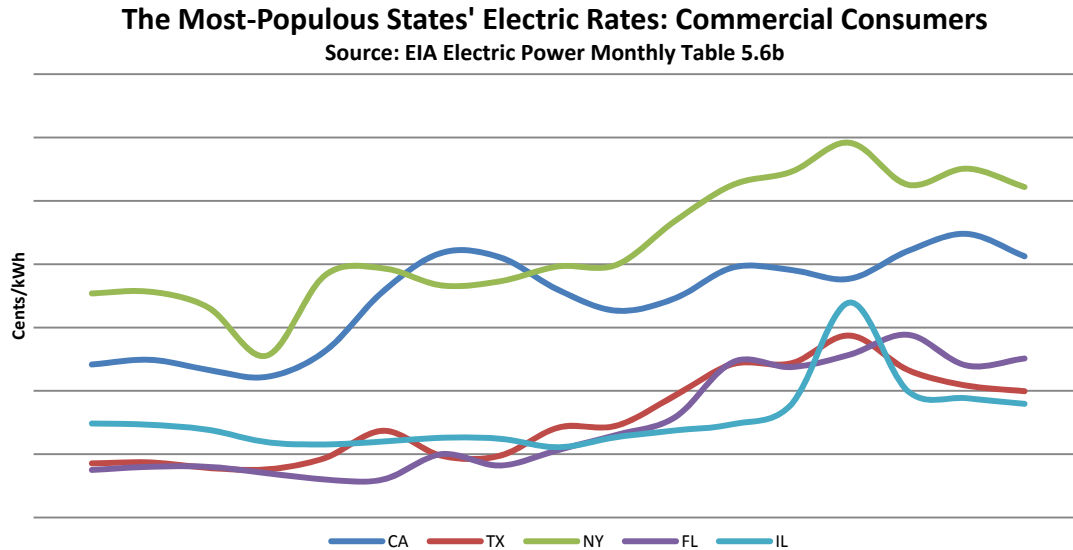
Florida's residential and commercial rates are always significantly below states with comparable populations.

The Most-Populous States' Electric Rates: Residential Consumers

Source: EIA Electric Power Monthly Table 5.6b



² State populations taken from the 2010 Census: <http://2010.census.gov/2010census/data>



However, one note of caution is that Florida electricity use per capita is among the highest in the U.S., primarily due to air conditioning loads.

Helping Florida make better long-term decisions

In recent years, Florida has increased its natural gas delivery infrastructure, with the result that the state now has the ability to import 30% more gas (2011 vs. 2010), thanks to the completion and commissioning of the FGT Phase VIII upgrade in early 2011. This upgrade will give Florida utilities access to vast quantities of a cost-competitive fuel source that in some cases is less expensive than the high-priced eastern coal burned by several utilities to generate electricity. Florida's reduction in coal consumption is largely driven by fuel-on-fuel price competition between coal and natural gas; the cost-effective advances in onshore shale-gas recovery have resulted in nearly three-fold reductions in the price of natural gas (in Florida natural gas beats nuclear better than 2:1 even with high estimates for natural gas prices). Another advantage is that in a coastal state like Florida, increased use of onshore natural gas resources reduces the volatility and price spikes associated with hurricanes and other weather-related impacts in the Gulf of Mexico.

Governor Scott campaigned and won on the basis of his plan, *7 Steps. 700,000 Jobs. 7 Years*. Our suggestions to help fulfill the goals of the governor are offered in the spirit of collegiality. We welcome your comments.

1. Substitute western coal for eastern coal

To generate electricity, Florida's utilities rely heavily on expensive eastern coal. Some of the southeastern states use "PRB" coal shipped by train from Wyoming's Powder River Basin – coal that is cheaper even after transport costs, as reported in the federal government's fuel cost reports. An example is Alabama, which uses more PRB coal than eastern coal.³

2. Implement best practices

Florida electric utilities spend over \$5 billion annually to purchase natural gas for generation. A detailed examination of the nexus between electric and gas energy sectors, including natural gas resources and delivery infrastructure past, present, and future, would be useful for two reasons: assessing fuel inputs and associated transportation infrastructure and supply chains, and identifying the utility best practices nationwide which reduce the price of electricity.

3. Keep protecting Florida's special environments

Many options besides nuclear and coal are available for generating electricity – solar, of course in the Sunshine State – but also demand-side management, and other smart-energy technologies.

4. Replace inefficient air conditioning in Florida homes and businesses

A pro-active campaign to replace the existing stock of old, inefficient units with high-efficiency technology and state-of-the-art controls could be successfully achieved with more utility incentives and appliance efficiency standards, in addition to those offered from time to time by the federal government. The potential savings to Florida residents and businesses is difficult to estimate at this time, but we believe it could exceed \$1 billion per year.

5. Initiate open energy meetings/workshops/seminars

Make sure that the factors which have produced electric rate increases of 5% in North Carolina (headquarters to both Duke and Progress) do not spill over into Florida. Use the knowledge gained to review utility rate-making policies regarding fuel-cost and capital recovery within and adjacent to Florida to identify where rate regulatory-related reductions and cost savings might be made.

³ http://www.ucsusa.org/assets/documents/clean_energy/Burning-Coal-Burning-Cash_full-report.pdf