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Fossil fuel resources, global warming, peaker power plants and our energy future

by Robert Farmer, © 2001

The following has been adapted from the author's remarks at an Enron Town Hall Meeting in Pompano Beach on May 3rd.

With limited time to speak, I've condensed my remarks into a few important points I'd like to make.

I'm going to address the "big picture", how these plants relate to energy policy and global warming. My opening points concern Florida's energy resources, the nation's resources, and their relationship to peaker plants.

Florida has no fossil fuel resources, unless you count what might be found by drilling off our beaches. The only native energy resource we have in any quantity is the sun. There isn't even enough wind to generate electricity in Florida. Right now all of the oil for our cars and the coal and natural gas for our electricity come from places other than Florida.

Enron proposes to import natural gas from Trinidad and Venezuela by way of a pipeline from the Bahamas. At the national level, Vice President Cheney recently said that 35,000 miles of new gas pipelines, the distance from New York to San Francisco 10 times over, needs to be laid throughout the United States in the next 20 years. And that we must build one new power plant every week for the next

20 years to meet the electricity demand. If the people accept the Administration's proposal for this expanded fossil fuel diet, Florida's prospects become more dire.

With the Vice President's forecast level of demand, expectations that natural gas will be abundant for longer than just a few years are misplaced.

Given the increased demand and the need for investment in pipelines, expectations that natural gas will be a cheap form of power are even more misplaced. As demand increases and supply becomes more constrained, only those able to pay increasing prices will be able to buy the energy that natural gas produces.

Now even if you don't buy the Administration's plan, you know that fundamental changes in the way we produce and consume energy must take place before we can wean ourselves of our fossil fuel diet.

And this is the most difficult task we face: *How do we reinvent our energy habits?*

Therefore, in Florida, because our energy security depends upon making the most of what we can get, and because we haven't even begun to think about how to become sustainable, this means we MUST burn our precious natural gas imports in the most efficient applications. There are no other options.

Which brings me to tonight's meeting and the discussion about peaker plants—

because they are the most inefficient form of gas turbine application. They are such a poor application that we should be finding ways of shifting peak power to minimize their need.

Florida must insist on efficient power plants that consume the least amount of fuel, not the most amount of fuel, so that we can stretch our tenuous resources further.

But maximum efficiencies are crucial for another important reason—emissions. Engines emit carbon dioxide implicated in global warming in direct proportion to the amount of fuel they burn, so power plants with more efficient engines emit less of these greenhouse gases.

In other words, the more fuel an engine consumes the less secure our energy supply, and the more pollution emitted.

Without better planning, sooner or later our total dependence on fossil fuels is going to bring our lives and our economy down on two fronts—the unreliability of the fuel supply, and global warming. And Florida is more vulnerable than most, which might also explain why diesel fuel backup really is an insurance policy for the merchant power plant operators.

Suggestions about energy planning

We should be planning for a sustainable future, not buying into the swan song years of the fossil fuel industry.

We need thoughtful power plan-

Fossil fuel resources ... (continued)

ning—by the Public Service Commission working with the Regional Planning Councils and the power companies; not the power companies alone. Their work should supplement and support energy sustainability initiatives that must begin at the community, the city and town level of government. And, as part of our transition to a more sustainable future, we should insist that only the most efficient systems be built.

We need a major outreach effort and financial incentives for peak power shifting, energy efficiency, and conservation measures for businesses and homeowners alike. And we need the political framework to begin a transition to an energy future based on the sun.

At the federal level, President Bush should be appropriating more money for research and development of renewable energy resources and incentives for their deployment—not decreasing the 2002 DoE renewables budget which he has proposed to do.

In Summary

Florida is totally dependent on interstate imports of fossil fuels—more so than most other states.

Gas demand and prices are escalating rapidly. Natural gas will become more valuable, especially to Floridians, and we should be putting it to better use than wasting it in inefficient peaker plants.

At best natural gas is a short-term transition to the future, it is not a long-term strategy.

We need a long-term sustainable energy plan for Florida based on efficient power systems, energy efficiency and conservation, and distributed renewable resources such as solar power.

Rational energy planning is so critical to our economic well being that the PSC must have a role in power system decisions in partnership with Regional Planning Councils and the power companies—not the power companies alone.

When Florida begins to address its energy security needs in the way I've suggested, and in a planned way, it will not only become less dependent on imported fossil fuels, it will also solve another problem and provide an equally important benefit to all of mankind. It will begin the process of combating climate change—which threatens to overwhelm us all.

We must begin the planning process TODAY. •



Robert Farmer is an energy planning engineer and energy policy specialist. A comprehensive resource on technologies, issues, and policies, he offers clients strategies, briefings, and presentations on planning a sustainable energy future.

His technical expertise includes large scale to small scale power generation, combined heat and power (CHP), marine and surface transportation, and alternative fuel applications.

A Florida resident since 1984, Robert was a member of the Energy Advisory Committee of Governor Chiles' Commission for a Sustainable South Florida.

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