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Pegeen Hanrahan's Comments and Questions Regarding the ICF Report

These questions and comments are directed both to the ICF consultants and also to the GRU staff. Some are more related to the operating agreements and circumstances of GRU, so may be more appropriately handled internally. Others are related to ICF's analysis. I present them together, however, in an effort to integrate the informational needs that, if filled, will help us to come to a rational decision.

Regarding Demand Projections

1. Several citizens have raised concerns regarding GRU's existing wholesale contracts with the City of Alachua, Clay Electric and any others that may exist. Their belief seems to be that if the city were to sever these contracts then we would not need a new generator as soon as currently projected. My questions in this regard are as follows:

a. What wholesale contracts currently exist, for how much power, and for how long, and how would ending these contracts affect GRU's need for new power generation? What percentage of our overall load demand is attributable to these contracts?

b. Are there technical, legal, economic or environmental constraints that would prohibit or discourage GRU from ending these contracts? For example, are some of our wholesale customers directly integrated with our distribution system? What are the other most likely service providers for these wholesale customers, and is their power source "cleaner" than our current generators and/or our proposed new generators? In other words, if we were to end our wholesale contracts and these customers were to instead receive their power from Progress or Clay or someone else, is this end result better or worse from an environmental perspective?

c. ICF has used past growth as a predictor for future demand, but we are aware of numerous large projects underway that may represent an increase in demand in excess of that projected (the new Shands Cancer Hospital; the proposed expansion of Butler Plaza; the 12 story Gainesville Greens development downtown; the 8 story University Corners project; the Springhills DRI; numerous large new subdivisions in High Springs, Alachua, Hawthorne, LaCrosse, and West Gainesville). Have these projects been taken into consideration in the demand projections? Is the opportunity for distributed generation, especially for cooling, been taken into consideration as one option for reducing the capacity needed at a central power station?

Regarding Buying and Selling Power on the Grid

a. If the Commission were to delay building a power plant to the point that our demand did exceed our ability to fully meet our native load, and/or we were in violation of our required reserve margins, what would be the consequence? Can the Public Service Commission reduce our service territory or levy fines, or is the primary downside simply that we are foregoing revenue to our system?

b. During the presentation, Mr. Rose referred to a technical limitation for importing power to our system in excess of 30 MW, I believe. Is this a constraint associated with the transmission system, or is it a constraint of some other type?

c. As I recall, prior to my election and before GRU entered into the current integrated resource planning process, the City Commission rejected the idea of participating in a larger project with JEA, the City of Tallahassee and other partners. I understand that the referenced project is going forward in Taylor County. Although in general I prefer that we take local responsibility for our own environmental impacts (and keep those jobs local as well), I am wondering if we have considered all the pros and cons of adding an increment of power generation to that plant, rather than building a new plant here at Deerhaven. Is this still a viable option?

Regarding the Maximum Demand Side Management Option, Plus Solar Energy Issues

a. The assumptions made to analyze the maximum DSM scenario assumed high natural gas prices and a high CO_2 allowance price. While this certainly would give a sense of the best conditions that would support increased conservation measures, it would also be useful to have an understanding of how much DSM would be clearly beneficial both environmentally and economically under current operating conditions, or those projected as likely for in the short term future. Is it possible to get a sense of which of the conservation measures analyzed would be justifiable now, as well as within five to ten years?

b. Why are FLP, Progress, and TECO are currently spending so much more money per capita on demand side management (DSM) in comparison to GRU? Are we able to estimate their energy savings per capita or other measure of success relative to GRU? Where do Tallahassee and Lakeland fall in this continuum? As I read the table titled "Comparison of Maximum DSM Scenario Spending with Other Utilities," ICF is estimating that GRU's current spending could essentially quadruple, from $21.75/capita/year currently to $81.23/capita/year. This would be far in excess of the $64.50/cap/yr currently being spent by Austin Energy. How much additional spending on DSM is economically justifiable under our current circumstances? Does the amount of spending on DSM that would be recommended vary depending on the generation technology we choose?

c. Several citizens have expressed concerns that solar energy technologies were not given full consideration, or that there was a gap of information regarding price and availability of various distributed options (solar hot water heaters, roof photovoltaics connected to the grid, etc.). Is it possible to receive an analysis of the range of solar programs being used throughout the U.S., their costs, penetration in the marketplace, and similar information? How much of the total electricity demand could conceivably be avoided with a robust solar program?

d. Are there examples of communities that have implemented reasonably regulatory efforts to reduce energy demands (such as requiring energy efficient construction or interruptible service under appropriate circumstances) that would be feasibly applied in Gainesville and Alachua County? Is there anything in state law that would discourage or prohibit such efforts?

e. Are there billing, metering or pricing structures that might have a significant impact toward encouraging conservation?

Regarding the GRU Proposal (CFB with Biomass, Coal and Petroleum Coke)

a. Does ICF's analysis of the environmental, economic and employment impacts from the CFB proposal take into account the greenhouse gas offset fund that was proposed as part of the CFB option? If not, can its impact be analyzed as well?

b. What is the maximum amount of waste biomass that could be used as part of this (or the IGCC) proposal, in terms of a percentage of the generating capacity? What types of waste biomass are feasible for use?

c. How can we ensure that we are not encouraging damage to natural ecosystems (clearing for crop production, or deforestation for fuel generation) as part of a biomass plant?

d. In the analysis of this option (and the next two), was the reduction in air emissions attributable to no longer burning waste wood at construction and forest products sites taken into account? Are air impacts from transportation of biomass, coal and/or petroleum coke taken into account? If not, can they be?

Regarding the IGCC Option (with Biomass, Coal and Petroleum Coke)

a. GRU officials have expressed a concern that our utility is too small to efficiently operate an IGCC plant. What is the ICF assessment of this concern?

b. Are the operational difficulties that have been experienced at the TECO IGCC plant likely to be reduced or eliminated in the technology that may be commercially available by the 2011 operational date under consideration?

c. Are the rating agencies likely to downgrade our bond rating if they perceive IGCC to be less reliable than CFB or some other more tested technology?

d. What assumptions led to the ICF initial conclusion that IGCC might actually be less expensive to build as compared to CFB?

e. Is there any real likelihood of being able to capture and sequester carbon from an IGCC plant over the expected lifetime of this project?

f. Is GRU likely to qualify for loan guarantees or other assistance that would keep the cost of borrowing money for an IGCC plant similar to the cost for a more conventional technology?

Several of the questions in the CFB section apply to this option as well.

Regarding the Maximum DSM Plus Biomass Only Option

a. Under aggressive conservation scenarios and realistic demand projections, if we were to implement a smaller biomass plant, when would GRU be facing the need for additional generating capacity if we were to build the smaller biomass plant as analyzed?

b. Is it feasible to develop a biomass delivery system that uses existing rail infrastructure rather than adding truck traffic to 441? If not, is it feasible to enter the GRU site from another route, to avoid additional large truck traffic near residential areas?

c. Why are CO_2 generation figures for the biomass option not substantially lower than shown, given that biomass is often referred to as a "carbon neutral" option?

Several of the questions in the CFB section apply to this option as well.

Regarding the Natural Gas Option

Note that we have not yet received this analysis, so more questions may be posed later.

a. How does the retirement of existing natural gas generators impact our ability to power up and power down units to address peak demands?

b. Given that the capital cost of a natural gas unit is so much lower than a coal unit, and given that capital costs are much less speculative than fuel costs, is it possible that a natural gas unit might conceivably end up being a lower cost solution in the long run?

c. Given that natural gas units can be built quickly and in smaller economical increments as compared to coal units, would it be feasible to build a smaller (50 to 100 MW) natural gas generator in the short term, in an effort to allow some of the emerging technologies to become better tested?

Regarding Carbon Emissions and Pollution Credits for SOx, NOx and mercury reductions

Is it possible for the city to implement other programs (for example, using biodiesel as appropriate in our fleet; capturing methane from wastewater plants by enclosing some tanks; increasing tree planting; increasing energy efficiency in our own buildings and in the private sector through codes changes and incentives) that would enable an overall reduction in greenhouse gas emissions from municipal operations, including the power plants? I believe the city completed a greenhouse gas inventory a few years ago, to establish a baseline.

When the pollution control retrofit of the Deerhaven II plant is complete, it is my understanding that we may be able to sell pollution credits in the commodities markets. What are we expecting the market value of these credits to be, and what are the pros and cons of selling the credits and applying the proceeds to emission reduction or conservation efforts that might not otherwise be considered financially feasible?