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State of Florida

Public Service Commission

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TALLAHASSEE, FLORIDA 32399-0850

-M-E-M-O-R-A-N-D-U-M-

DATE: May 20, 2010

TO: Office of Commission Clerk (Cole)

FROM: Division of Regulatory Analysis (Brown, Ellis)
Division of Economic Regulation (Springer)
Office of the General Counsel (Sayler, Brown)

RE: Docket No. 090451-EM – Joint petition to determine need for Gainesville Renewable Energy Center in Alachua County, by Gainesville Regional Utilities and Gainesville Renewable Energy Center, LLC.

AGENDA: 05/27/10 – Special Agenda – Post-Hearing Decision – Participation is Limited to Commissioners and Staff

COMMISSIONERS ASSIGNED: All Commissioners

PREHEARING OFFICER: Skop

CRITICAL DATES: 05/27/10 (135 day deadline pursuant to Rule 25-22.080(2), Florida Administrative Code, waived through this date.)

SPECIAL INSTRUCTIONS: Issue 1 has been stipulated.

FILE NAME AND LOCATION: S:\PSC\RAD\WP\090451.RCM.05-20-10.DOC

Case Background

Gainesville Regional Utilities (GRU) is a vertically integrated electric power production, transmission, and distribution system that is wholly owned by the City of Gainesville. GRU also provides wholesale electric service to the City of Alachua and Clay Electric Cooperative.[1]

[1] GRU provides wholesale electric service to Clay Electric Cooperative through a contract between GRU and Seminole Electric Cooperative, of which Clay Electric Cooperative is a member.

GRU's distribution system serves approximately 93,000 residential and commercial customers in both the incorporated and unincorporated areas of its service territory.

In 2007, the Gainesville City Commission began an extensive solicitation for biomass power proposals, resulting in the selection of a proposal by American Renewables, LLC (American Renewables) on May 12, 2008.[2] American Renewables created a wholly-owned subsidiary, Gainesville Renewable Energy Center, LLC (GREC LLC) for the proposed project. On May 7, 2009, the Gainesville City Commission unanimously approved the negotiated purchased power agreement (PPA) between GRU and GREC LLC for the purchase of energy and capacity from a proposed biomass-fueled facility for a term of 30 years.

On September 18, 2009, pursuant to Section 403.519, Florida Statutes (F.S.), and Rule 25-22.080 and 25-22.081, Florida Administrative Code (F.A.C.), GRU and GREC LLC (the Joint Petitioners) filed a joint petition for determination of need for the proposed Gainesville Renewable Energy Center (GREC Project) at GRU's existing Deerhaven plant site in Alachua County, Florida. GREC LLC will build a new nominal rated 100 megawatt (MW) net biomass-fired electric generating facility with an in-service date of December 1, 2013, located on land leased from GRU. The unit qualifies as an electrical power plant requiring a determination of need, as defined by Section 403.503(14), F.S., because it exceeds 75 MW of steam electrical generation.

On December 9, 2009, the Commission convened a public hearing in Gainesville to take public comment on the proposed GREC Project. The Commission heard from several public witnesses with a range of concerns and comments, and collected several exhibits from those witnesses. On December 16, 2009, the Commission conducted a technical hearing in Tallahassee. Public witnesses were also provided the opportunity to testify at that hearing, with several ratepayers participating. The Joint Petitioners filed a brief on January 6, 2010.

At the conclusion of the February 9, 2010 Agenda Conference, the Commission approved GRU's request to re-open the record for the limited purpose of addressing concerns raised by the Commissioners during the Agenda Conference. Those concerns fell into three basic categories: (1) the Commission's role in a need determination proceeding involving a municipal utility, (2) risk mitigation measures available to the City of Gainesville and GRU, and (3) fuel availability and sustainability.

On March 3, 2010, the Prehearing Officer convened a Status Conference to address procedures regarding the additional record evidence. Ms. Deevey and Ms. Stahmer were granted leave to intervene on March 8, 2010.

On May 3, 2010, the Commission conducted a supplemental technical hearing in Tallahassee. Public witnesses were again provided the opportunity to testify at the second hearing. More than two dozen witnesses, including the Florida Agriculture Commissioner, a State Senator, several Gainesville City Commissioners, GRU ratepayers, and other concerned persons testified. Below is a list of topics of interest voiced by the public at the public hearing in

[2] American Renewables is formerly known as Nacogdoches.

Gainesville and the two public hearings in Tallahassee, and a reference to where they will be addressed in this recommendation:

- System Reliability and Integrity – Issue 2
- Reasonable Cost of Electricity – Issue 3
- Fuel Diversity & Supply Reliability – Issue 4
- Renewables/Conservation/Demand-Side Management – Issue 5
- Cost-Effectiveness – Issue 6

Public testimony also focused on subjects, such as environmental and health concerns, local economic impacts, and traffic concerns, which are beyond the Commission's jurisdiction under its authorizing statutes. The public testimony regarding environmental concerns and health issues falls under the Department of Environmental Protection's (DEP) jurisdiction and may be relevant in certification proceedings before the DEP, the Division of Administrative Hearings (DOAH), and the Governor and Cabinet presiding as the Siting Board.

For purposes of reference, Staff will refer to the transcripts from the original technical hearing as "OTR," and from the supplemental technical hearing as "STR."

The Commission has jurisdiction over the subject matter of this proceeding pursuant to Sections 366.04(2)(c), 366.05, 366.92, 403.507(4), and 403.519, F.S.

Executive Summary

At the conclusion of the February 9, 2010 Agenda Conference, the Commission approved GRU's request to re-open the record for the limited purpose of addressing concerns raised by the Commissioners. Those concerns fell into three basic categories: (1) the Commission's role in a need determination proceeding involving a municipal utility, (2) risk mitigation measures available to the City of Gainesville and GRU, and (3) fuel availability and sustainability. Below is a discussion on each category as well as a synopsis of the overall staff recommendation.

Commission's Role

The Commission's need determination is an integral part of the overall site certification process. The Commission is the sole forum for a determination of need and, if a need determination is granted, the process continues with reviews by the DEP and other state and local agencies. Final certification requires the approval of the Governor and Cabinet presiding as the Siting Board based on their review of the total record.

In making its determination of need, Section 403.519, F.S., requires the Commission to take into account the following criteria:

- The need for electric system reliability and integrity.
- The need for adequate electricity at a reasonable cost.
- The need for fuel diversity and supply reliability.
- Whether the proposed plant is the most cost-effective alternative available.
- Whether renewable energy sources and technologies, as well as conservation measures, are utilized to the extent reasonably available.
- Other matters within its jurisdiction which it deems relevant.

While the applicable need determination statute makes it clear that each of these factors must be taken into consideration, the statute does not prescribe what importance or weight should be given to each by the Commission. Therefore, the Commission has broad authority to determine how each of these criteria may be weighted, and has the discretion to determine the need for an electrical power plant based upon one or more of the qualifications above, so long as each has been considered as a component of the final decision.

The promotion of the development of renewable energy in the State of Florida is a matter falling within the Commission's jurisdiction and is relevant for consideration in this proceeding. The Legislature has provided guidance to the Commission specifically related to promoting renewable energy in Section 366.92(1), F.S., which states:

> It is the intent of the Legislature to promote the development of renewable energy; protect the economic viability of Florida's existing renewable energy facilities; diversify the types of fuel used to generate electricity in Florida; lessen Florida's dependence on natural gas and fuel oil for the production of

> electricity; minimize the volatility of fuel costs; encourage investment within the state; improve environmental conditions; and, at the same time, minimize the costs of power supply to electric utilities and their customers.

The Legislature also provided guidance to municipal utilities and rural electric cooperatives in Section 366.92(5), F.S. which states:

> Each municipal electric utility and rural electric cooperative shall develop standards for the promotion, encouragement, and expansion of the use of renewable energy resources and energy conservation and efficiency measures....

Over the course of both hearings, it became clear that the Gainesville City Commission's decision to pursue the GREC Project was the result of the community's desire to encourage the expansion of renewable energy resources. The GREC project is also designed to provide a hedge against future regulation of carbon emissions and achieve the Gainesville City Commission's self-imposed goals for greenhouse gas reduction.

The Commission will not review the final costs or establish rates resulting from the proposed GREC project because GRU, a municipal utility, is not rate-regulated by this Commission.[3] As such, it is the Gainesville City Commission that is ultimately responsible to its citizens/ratepayers for all rate impacts associated with the project. The record indicates that both the Gainesville City Commission and GRU made many efforts to inform GRU's customers that their rates could increase when the plant is operational. Staff would expect that the Gainesville City Commission will review the project's total costs as well as other impacts associated with the project such as increased jobs, property taxes, traffic patterns, and future off-system power sales before establishing retail electric rates for its citizens.

Need for Electric System Reliability and Integrity and Fuel Diversity (Issues 2 and 4)

GRU's current load forecast indicates that the utility does not have a strict reliability need for additional capacity until the year 2023, but the addition of the GREC capacity will improve GRU's overall reliability and contribute significantly to fuel diversity on GRU's system. In the past, the Commission has approved need determinations for cogeneration and renewable facilities for similar reasons. The Commission's decision on a need determination petition must be made several years in advance and based on the facts as they exist at the time of the filing. If conditions change from what was presented at the need determination proceeding, then a prudent utility would be expected to respond accordingly.

Most Cost-Effective Alternative and Risk Mitigation Measures (Issues 3 and 6)

The purchased power from the GREC project may initially increase the cost of electricity for GRU's customers by $3 to $13 dollars per month. This is a nominal improvement over the evidence provided during the original hearing. The evidence continues to indicate that the only scenario where the GREC Project would become the most cost-effective alternative would be if

[3] Section 366.11, F.S.

pending legislation regarding CO_2 emissions is enacted. While the Commission is concerned about what risk mitigation measures have been taken or will be taken in order to minimize any adverse rate impacts, the Gainesville City Commission is ultimately responsible to its citizens-ratepayers for the rate impact associated with the project. During the supplemental hearing, witnesses described risk mitigation techniques and indicated that the Gainesville City Commission considered other aspects of the project such as additional tax revenues, local job creation, bond ratings, and other matters outside the need determination statutes. Again, if projections presented at the hearing do not materialize, then staff would expect GRU and the City of Gainesville to respond accordingly in order to minimize any adverse rate impacts.

Florida Statutes and Commission Rules related to purchased power contracts provide safeguards such that IOU ratepayers would not pay above avoided costs for purchases of renewable capacity and energy.[4] Such is not the case with the current docket because GRU is not rate-regulated by this Commission. Staff notes, therefore, that if the petitioner were an IOU, our recommendation may have been different.

Fuel Availability (Issues 4 and 6)

During the supplemental portion of the hearing, additional information was provided to show that there is an adequate supply of woody biomass available to support the output of the GREC facility. While no contracts have been signed to date, there are letters of intent and GREC LLC continues to negotiate with area suppliers. During the public testimony phase of the supplemental hearing, forestry representatives from near-by communities offered their support of the project and the resulting employment opportunities. It should be noted that since this is a purchased power agreement, GRU's ratepayers will only pay if power can be produced. In other words, if the GREC facility were not able to secure enough woody biomass to meet its performance obligations, then GRU's ratepayers would be held harmless.

Summary of Recommendation

After considering all the evidence contained in the record, staff continues to recommend approval of the need for the GREC biomass facility because the project should:

- Enhance the overall reliability of the GRU system and can replace older, less efficient generation.
- Satisfy a need for GRU to improve its fuel diversity and supply reliability.
- Promote the development of renewable generation in Florida.
- Become the most cost-effective alternative if pending legislation regarding CO_2 emissions is enacted.

[4] See Florida Statutes 366.051 and Rules 25-17.0825, 25-17.0832, 25-17.240, and 25-17.250, F.A.C.

Discussion of Issues

Issue 1: Are Gainesville Regional Utilities and Gainesville Renewable Energy Center, LLC proper applicants within the meaning of Section 403.519, F.S.?

Stipulation: At the December 16, 2009 hearing the Commission voted to approve the following stipulation:

Yes. Gainesville Regional Utilities (GRU) is a municipal electric, natural gas, water, wastewater, and telecommunications utility serving retail customers; it is owned and operated by the City of Gainesville in Alachua County, located in north-central Florida; and it is a valid applicant under the Florida Electrical Power Plant Siting Act (PPSA), Chapter 403, Part II, F.S.

Gainesville Renewable Energy Center, LLC (GREC LLC) is a private renewable power producer that will own, operate, and maintain the proposed Gainesville Renewable Energy Center biomass facility and sell 100 percent of the facility's electric power output to GRU under a 30-year power purchase agreement (PPA). GREC LLC is an appropriate joint applicant pursuant to the Commission's decisions and the Florida Supreme Court's decision in Nassau Power Corp. v. Deason, 641 So. 2d 396 (Fla. 1994). (Sayler, M. Brown)

Issue 2: Is there a need for the Gainesville Renewable Energy Center, taking into account the need for electric system reliability and integrity, as this criterion is used in section 403.519, F.S.?

Recommendation: GRU's load forecast indicates that GRU does not have a reliability need for additional capacity until 2023, based on a 15 percent reserve margin criteria. However, the GREC Project would enhance the overall reliability of the GRU system. (S. Brown, Ellis)

Position of the Parties

Joint Petitioners: Yes. GREC's capacity is needed to improve and maintain the reliability of GRU's existing system, to provide reliable baseload generating capacity, particularly considering GRU's aging generating fleet and the anticipated retirement of 148MW of capacity by 2023, and especially to replace capacity from GRU's Deerhaven 2 baseload unit during outages.

Stahmer: The Project will not enhance GRU's system reliability and integrity; instead it will encumber the utility with outdated technology for which it and its ratepayers will be paying an extravagant amount of money. As Petitioners acknowledge, GRU does not need new base load capacity in the immediate future. Therefore, GRU should take advantage of its temporary security and seek out more modern technologies while implementing even more DSM programs and conservation policies. The best way to secure the utility's future and protect beleaguered ratepayers is to diminish the demand for consumption, not increase it.

Deevey: No position on this issue

Staff Analysis:

PARTIES' ARGUMENTS

The Joint Petitioners contend that the capacity of the proposed GREC Project is needed to improve and maintain reliability of GRU's existing system. (GRU BR 10) The Joint Petitioners state that the capacity from the proposed GREC Project is needed to replace capacity resulting from maintenance and forced outages on GRU's Deerhaven 2 unit. (GRU BR 10-11) In addition, the Joint Petitioners state that the GREC Project is needed by GRU to provide reliable, low-cost baseload capacity in light of the fact that most of the remainder of GRU's capacity will be retired during the term of the GREC LLC PPA. (GRU BR 11) The Joint Petitioners state that GRU currently purchases baseload capacity and energy from Progress Energy Florida Inc.'s (PEF) as an economic and reliability hedge, and the expiration of this contract in 2013 results in a need for baseload capacity. (GRU BR 12) The Joint Petitioners assert that the overall decision to pursue the GREC Project was based on the City of Gainesville's commitment to address the environmental concerns of climate change, sustainability, and energy independence. (GRU BR 12) The Joint Petitioners contend that GRU's wholesale contracts with the City of Alachua and Clay Electric Cooperative are anticipated to be renewed, and that allowing them to expire without renewal would not affect the timing of GRU's strict reserve margin need. (GRU BR 13)

Intervenor Stahmer contends that GRU does not require additional baseload capacity. (Stahmer BR 2) Intervenor Stahmer asserts that GRU should use its projected period of excess capacity to implement additional conservation measures. (Stahmer BR 2-3)

Intervenor Deevey took no position on this issue, but raises a related subject in her discussion of Issue 5. Intervenor Deevey contends that GRU could significantly delay a capacity need by electing to not renew its wholesale contracts with the City of Alachua and Clay Electric Cooperative.[5] (Deevey BR 9) In addition, Intervenor Deevey asserts that not renewing the wholesale contracts would result in significant decreases in energy needs, and result in lower CO_2 emissions by GRU. (Deevey BR 11) Finally, Intervenor Deevey states that by delaying a capacity need, GRU would have additional time to seek alternatives to the GREC Project. (Deevey BR 11)

INITIAL HEARING ANALYSIS

GRU developed forecasts for the number of customers, energy sales, and seasonal peak demands for 2009 through 2044. (OTR 218) Staff reviewed GRU's forecast assumptions, regression models, and the projected system peak demands and believes they are appropriate for use in this docket. The forecast assumptions were drawn from independent sources, which the Commission has relied upon in prior cases. The regression models used to calculate the projected peak demands conform to accepted economic and statistical practices.

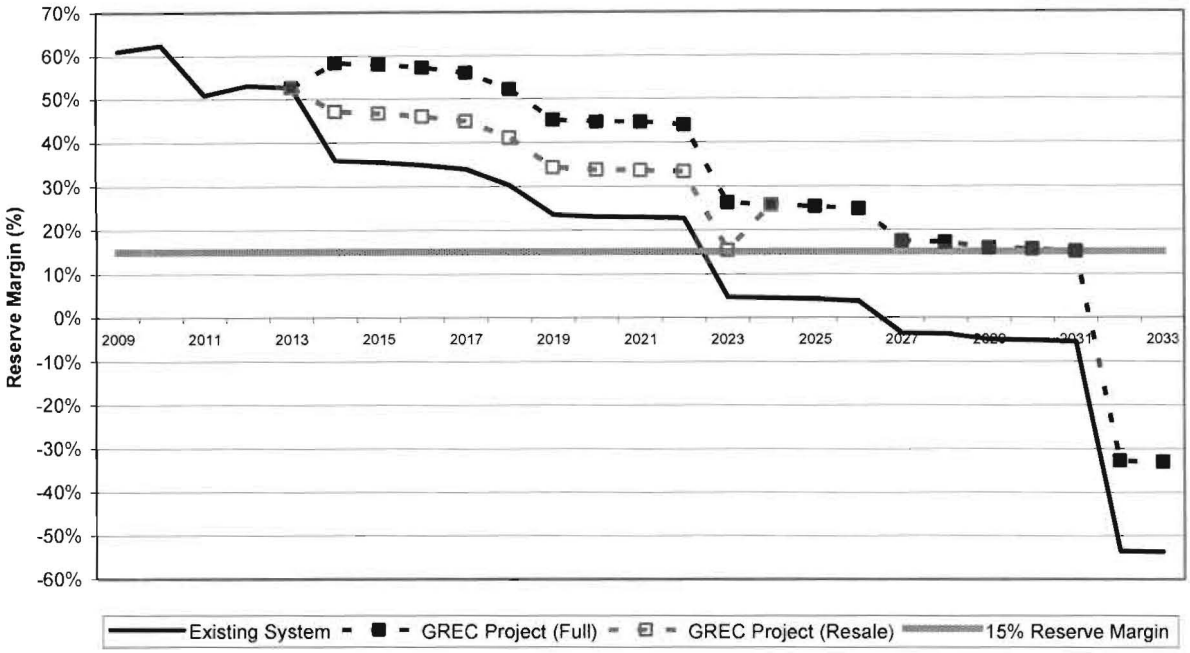
GRU uses the University of Florida's Bureau of Economic and Business Research (BEBR) to develop its population projections. (OTR 158) GRU's base case annual net energy for load forecast projects usage growth in the 2009 through 2044 period, at an average annual growth rate of approximately 0.71 percent. (OTR 220, EXH 27)

GRU's existing net summer generating capacity is approximately 608 MW. (OTR 82) The Deerhaven and John R. Kelly generating facilities are the primary sites on the GRU system. Both the Deerhaven and John R. Kelly facilities consist of steam turbine and combustion turbine units. The John R. Kelly facility also includes a combined cycle unit. Also included on the GRU system are: the South Energy Center, which provides combined heat and power services to the Shands HealthCare cancer hospital; a share of PEF's Crystal River 3 nuclear unit; and distributed generation. (OTR 82) For 2009, GRU projected a summer peak demand of 441 MW which results in a reserve margin of 269 MW or 61 percent. (EXH 24, p. 2 of 8)

The first step in analyzing the need for new generating capacity is to determine the timing of a unit addition. Typically, such analyses attempt to project when a utility's system will fall below a predetermined planning criterion, such as reserve margin. GRU uses a 15 percent reserve margin as a planning criteria for such analyses. Assuming load growth as discussed above, GRU's existing capacity would exceed the 15 percent criteria until the year 2023. In 2023, GRU will need an additional 48 MW of capacity. (EXH 27) This is attributed to the retirement of GRU's Deerhaven Steam Unit 1 which will result in a reduction of 83 MW of summer net capacity. Such a result indicates that from a system reliability viewpoint GRU's existing system is adequate to serve projected load for over a decade. As the graphs below indicate, if the GREC Project is added to GRU's system as proposed, then GRU's reserve margin would be greater than 15 percent until the year 2032. (EXH 27)

[5] GRU provides wholesale electric service to Clay Electric Cooperative through a contract between GRU and Seminole Electric Cooperative, of which Clay Electric Cooperative is a member.

Figure 2-1 - GRU's Summer Reserve Margin and Impact of GREC Project



While not technically needed to maintain reliability of the GRU system, the addition of the GREC Project will enhance Peninsular Florida's and GRU's system reliability and fuel diversity. The capacity from the proposed GREC Project will add value to GRU's generation portfolio by modernizing its generation fleet. (OTR 92) Approximately two-thirds of GRU's existing capacity is at least 28 years old. (OTR 92) It should also be noted that GRU plans a 50-year unit life for most of its current generating units. (EXH 27) However, GRU expects the Deerhaven 2 unit will exceed its 50-year life expectancy. (OTR 112) Some units such as coal-fired units can have a life expectancy as high as 60 years. Deerhaven Unit 2 is GRU's main generating unit; it is a 222 MW coal unit that has operated since 1981. (OTR 82) The capacity from the proposed GREC Project would enhance reliability by replacing capacity lost during maintenance and forced outages at the Deerhaven 2 unit. (OTR 80) Moreover, the GREC Project will improve GRU's generating system reliability from both a firmness of capacity perspective and from the perspective of exposure to high cost of replacement power. (OTR 92) GRU's primary focus was fuel diversification and to provide a financial hedge against future carbon regulation. The issue pertaining to fuel diversification will be discussed in greater detail in Issue 4. The issue pertaining to future carbon legislation will be discussed in greater detail in Issue 6.

SUPPLEMENTAL HEARING ANALYSIS

The primary focus of the supplemental hearing relating to electrical system reliability and integrity was a clarification of the need for baseload capacity specifically. Intervenors also raised questions regarding wholesale contracts and their potential impact upon GRU's need for capacity.

As previously discussed, the GREC Project represents the addition of capacity before GRU's own projections indicate a strict reserve margin need. (STR 218) The GREC Project would improve system reliability by providing baseload generation, including during planned and unplanned outages of Deerhaven Unit 2. (STR 206, 254) Outages during peak periods, such as the Winter 2010 cold snap, could require purchases from other utilities with limited options for GRU. (STR 265-6)

In developing GRU's forecasted peak demand for the contract period, GRU embedded wholesale sales resulting from contracts with the City of Alachua and Clay Electric Cooperative. (EXH 27, p. 4-4) These full requirements contracts include maintaining sufficient generation resources to serve the demand and provide for a reserve margin, and increase GRU's forecasted peak demand and annual net energy for load. These contracts expire before the GREC contract period begins, but are expected to be renewed on or before that date. (EXH 64, BSP-000506) Intervenors argue that if GRU elects to let the contracts expire without renewal, GRU would increase its reserve margin by decreasing its overall peak demand. (EXH 64, BSP-000506-11) GRU states that if the specific contracts with City of Alachua and Clay Electric Cooperative are not renewed, then the utility would attempt to market the excess capacity to maximize value for its retail customers of its existing capacity. (EXH 64, BSP-000506) Staff believes that if the wholesale contracts are allowed to expire without renewal, the GREC Project still enhances fuel diversity and acts as a hedge against future carbon regulation, as discussed in Issues 4 and 6, respectively.

Intervenor Stahmer proposes that GRU seek to add additional conservation measures to further reduce GRU's demand and energy. Staff addresses Intervenor Stahmer's concerns regarding conservation more fully in Issue 5.

CONCLUSION

Based on GRU's 15 percent reserve margin criteria and expected renewal of existing wholesale contracts, GRU's load forecast indicates that the Company does not have a reliability need for additional capacity until 2023. However, the GREC Project would improve the overall reliability of the GRU system, particularly during potential outages of Deerhaven Unit 2 or periods of high demand. The expiration and expected renewal of wholesale contracts does not influence the need for the GREC Project, as it is needed for fuel diversity and as a hedge against future carbon legislation.

Issue 3: Is there a need for the Gainesville Renewable Energy Center, taking into account the need for adequate electricity at a reasonable cost, as this criterion is used in Section 403.519, F.S.?

Recommendation: There is considerable uncertainty about the economics of this project. The GREC Project would result in a loss of approximately $56 million based on a cumulative net present worth revenue requirement analysis using current environmental regulations, fuel forecasts, and market assumptions. However, the GREC Project could result in a savings of approximately $448 million if pending environmental regulations are enacted, and GRU resells half of the capacity at full contract price. Therefore, the GREC Project acts as a hedge against potential cost increases associated with future regulation of carbon emissions and renewable energy. (S. Brown, Ellis)

Position of the Parties

Joint Petitioners: Yes. The Project and PPA are cost-effective when compared to other self-build supply options and to other renewable energy options available to GRU. Short-term bill increases, if any, are normal, and the Project will produce substantial long-term bill reductions and provide significant, highly valuable risk mitigation benefits to GRU's customers.

Stahmer: The GREC Project will not provide electricity at a reasonable cost. The Petitioners have ignored the forecasts of their own experts and consultants who almost uniformly predict a significant and rapid increase in the costs of woody biomass. Recent federal regulatory action also suggests that woody biomass will be subject to controls not contemplated by Petitioners. Additionally, Petitioner's own evidence casts doubt on the manner by which the charges and costs under the PPA agreed to by the Petitioners was arrived at.

Deevey: The Petitioners have not established what costs of the Renewable Energy Center will be because they have not provided evidence or support for the claims that woody biomass fuel will remain inexpensive throughout the 30 year duration of the proposed PPA.

Staff Analysis:

PARTIES' ARGUMENTS

The Joint Petitioners state that GRU performed a levelized cost of energy (LCOE) and cumulative present worth revenue requirement (CPWRR) analysis of the GREC Project. (GRU BR 15) The Joint Petitioners contend that when compared to multiple alternative technologies to be constructed by 2014, the GREC Project was the most cost-effective excluding coal. (GRU BR 15) The Joint Petitioners assert that while the GREC Project is not as cost-effective in an LCOE analysis as a pulverized coal unit, it is unlikely that a coal unit would be permitted in Florida. (GRU BR 15)

The Project and PPA are cost-effective when compared to other self-build supply options and to other renewable energy options available to GRU. (GRU BR 15-16) The Joint Petitioners contend that an extensive and competitive solicitation process was utilized under the guidance of the Gainesville City Commission. (GRU BR 16-17)

The Joint Petitioners assert a wide variety of risks are mitigated by the GREC Project, including fossil fuel price volatility, fuel supply reliability, replacement power cost. (GRU BR 18-19) The Joint Petitioners also contend that the contract's provisions protect GRU and its customers from issues that would exist if the GREC Project was self-build, including unit degradation, cost of outages of the GREC Project, and financial risks from increased debt. (GRU BR 19-20)

The Joint Petitioners argue that biomass fuel cost is effectively mitigated by a combination of cost-sharing and gain-sharing, GRU's ability to reduce the GREC Project's dispatch, and the opportunity to take over fuel procurement. (GRU BR 20) Further, the Joint Petitioners assert that biomass costs will be more stable than fossil fuels. (GRU BR 21) Additionally, the Joint Petitioners state that GRU considers that future regulation of carbon emissions or renewable energy, enacted by legislation or rule, is inevitable. (GRU BR 22)

Regarding cost-effectiveness, the Joint Petitioners state they do not agree with the usage of a "No New Construction until 2023" case as a "base case." (GRU BR 23) The Joint Petitioners believe that the most appropriate "base case" is the Regulated CO_2 Case with Full Contract Resale. (GRU BR 23) The Joint Petitioners conclude that short-term bill increases from the GREC Project will quickly result in significant savings over the duration of the contract. (GRU BR 23) The Joint Petitioners state that short-term bill increases are not unusual for baseload capacity additions, but that they tend to result in rate decreases in the long-term. (GRU BR 23-24)

The Joint Petitioners argue that the GREC Project will meet the Gainesville City Commission's policy objectives, protect GRU's customers, and meet GRU's need for adequate electricity at a reasonable cost. (GRU BR 25)

Intervenor Stahmer argues that the Joint Petitioners have not included the impact of forecasted price increases for the biomass fuel to be consumed by the GREC Project. (Stahmer BR 2-3) Intervenor Stahmer contends that the negotiated contract between GRU and GREC LLC increased the capital costs of the GREC Project significantly compared to the original bid. (Stahmer BR 13) Intervenor Stahmer suggests that construction indicies are an insufficient explanation for the capital cost increase. (Stahmer BR 13-16)

Intervenor Deevey contends that the cost effectiveness of the project hinges upon the cost of the biomass fuel to be consumed by the GREC Project. (Deevey BR 2) Intervenor Deevey suggests that the price of biomass proposed by the Joint Petitioners is not reasonable, as biomass prices would increase significantly with the enactment of a renewable portfolio standard (RPS), either at a state or federal level. (Deevey BR 2) Intervenor Deevey asserts that several studies show an RPS would increase demand for forestry products, and result in price increases. (Deevey BR 5) Intervenor Deevey states that the Joint Petitioners have not demonstrated that biomass fuel prices will remain indexed to inflation, but rather could face large price increases from potential RPS legislation. (Deevey BR 8)

INITIAL HEARING ANALYSIS

GRU conducted a Levelized Cost of Electricity (LCOE) analysis of the GREC Project using multiple scenarios, including several alternative units. The alternate units include a combustion turbine unit, a combined cycle unit, a pulverized coal unit, and a pulverized coal unit with carbon capture and sequestration. (EXH 27, p. 10-1) The GREC Project had a lower LCOE value than any of the natural gas-fired alternatives, and was more cost-effective than the coal-fired alternatives when considering carbon regulation or carbon capture and sequestration. (EXH 18) On an annual basis the GREC Project did not always possess the lowest cost per kilowatt-hour. In the beginning years, the GREC PPA was more expensive than some of the alternative units in certain scenarios. (EXH 22) However, the LCOE analysis demonstrated that over the 30-year term of the PPA, the GREC Project resulted in the lowest LCOE, as further discussed in Issue 6. (EXH 18)

Staff believes that while the LCOE analysis performed by GRU is a valuable screening tool, it may have misleading assumptions for the GREC Project. As discussed in Issue 2, GRU's current generating fleet is sufficient to adequately supply electricity to GRU's ratepayers until 2023. (EXH 2, pp. 98-101) The LCOE analysis conducted assumes all units would be placed in commercial operation by 2014. (EXH 22) As a result, staff believes that a more appropriate comparison would be between the GREC Project and no new construction until 2023. Other issues concerning the appropriateness of the LCOE analysis are elaborated on in Issue 6.

At staff's request, GRU conducted a CPWRR Analysis, comparing the GREC Project to GRU's system cost assuming no new construction until 2023. (OTR 152; EXH 7, pp. 56-58, pp. 98-104) Under this analysis, GRU would receive the full capacity of the GREC Project for the entire 30-year period. Such a scenario originally resulted in a cumulative net present value cost of approximately $100 million over the contract's term. (EXH 24, p. 4 of 8)

GRU states in its petition that it intends to resell approximately half the capacity of the GREC Project during the first ten years. (EXH 27, p. 9-5) As part of its analysis, GRU assumed that it will be able to resell the power from the GREC Project at the full contract rate. With this assumption, GRU originally estimated that the GREC Project would show a total savings of approximately $62 million over the 30-year period. (EXH 24, p. 4 of 8) Staff believes it is likely that GRU would be able to resell some or all of the GREC Project's capacity, though GRU may not receive the full contract price.

Another major influence on GRU's system cost is the potential of carbon regulation, which was modeled in a series of scenarios by GRU. As discussed further in Issue 6, GRU modeled the potential cost impact of future carbon regulations based on pending carbon legislation, specifically House Resolution 2545, or the Waxman-Markey Bill. (OTR 302) The GREC Project originally showed large savings with carbon regulation, ranging from $311 million without resale, to as much as $409 million with resale. (EXH 24, p. 4 of 8)

SUPPLEMENTAL HEARING ANALYSIS

The supplemental hearing featured significant updates, including additional information on potential carbon and renewable legislation, fuel forecasts, market sales, and other factors.

Concerns of high biomass prices were a focus of the Intervenors arguments. Intervenor Stahmer also raised the issue of an increase in capital cost of the GREC Project between an initial bid and the final negotiated contract. Overall, staff addresses the concerns raised by the Joint Petitioners and the Intervenors more fully in Issue 6.

At staff's request GRU updated the CPWRR analysis discussed above. In updating it, GRU provided multiple iterations of the CPWRR analysis discussed above, including multiple significant changes from the initial filing. First, an updated fuel forecast was utilized, as a more recent one had become available since the December 9, 2009 Hearing for natural gas and coal. (EXH 64, BSP-000532-4) This updated fuel forecast shows a small initial increase in natural gas and coal prices, followed by a significant decrease in the outer years compared to the previous fuel forecast.

Second, GRU included potential profits from sales of renewable energy credits (RECs) produced by the GREC Project in the Regulated CO_2 Case. (EXH 65, BSP-000638-9) This is intended to reflect the effects of the renewable portfolio standard proposed as part of the Waxman-Markey Bill, which forms the basis of the Regulated CO_2 Case. (STR 454-6) Potential carbon regulations are discussed further in Issues 5 and 6.

Third, GRU included the value of potential market sales from existing assets during periods of excess capacity. (EXH 66, BSP-000652, 56-66) These serve to reduce system costs in all scenarios, including No New Construction. These underutilized existing assets, so-called stranded assets, were not considered in the initial filing.[6]

Fourth, GRU considered sales from the GREC Project if GRU was unable to resell the half of the output at full contract price. (EXH 64, 00531-2) A market contract price was developed based upon a sale of firm capacity and energy from 50 MW of the GREC Project, using GRU's contract with PEF as a model. As such, all scenarios now consider the resale of half of the GREC Project's capacity for the initial ten years of operation. It is important to note that GRU currently has no signed contracts for resale of the GREC Project, either at full contract price (formerly the "Resale" scenario, now the "Full Contract" scenario) or at a market-based price (replacing the "No Resale" scenario with the "Market Resale" scenario).

As part of GRU's supplemental filings, a revision to the CPWRR analysis was provided to staff in Interrogatory No. 57. (EXH 70, 001598-604) The CPWRR analysis is described further in Issue 6. A summary and comparison of the revised, original estimate, and the current one is listed below in Table 3-1.

[6] For purposes of this recommendation, staff considers stranded assets to be those generating assets that are available for use for economic wholesale sales, but are not utilized.

Table 3-1 – Cumulative Present Worth Revenue Requirement Analysis Summary (EXH 87)

Cumulative Present Worth (2009$, $000) Analysis Update				
Scenario	Revised Original Estimate		Current Estimate	
	Title	Value	Title	Value
Base Case	Resale	70,609	Full Contract	40,970
	No Resale	(92,627)	Market Resale	(56,104)
Regulated CO_2	Resale	414,002	Full Contract	448,009
	No Resale	313,662	Market Resale	419,169
Note: Parentheses, (#), denotes a net cost to GRU.				

CONCLUSION

The GREC Project would result in a loss of approximately $56 million based on a CPWRR analysis using current environmental regulations, fuel forecasts, and market assumptions. However, the GREC Project could result in a savings of approximately $448 million if pending environmental regulations are enacted, and GRU resells half of the capacity at full contract price. Therefore, the GREC Project acts as a hedge against potential cost increases associated with future regulation of carbon emissions and renewable energy.

Issue 4: Is there a need for the Gainesville Renewable Energy Center, taking into account the need for fuel diversity and supply reliability, as this criterion is used in Section 403.519, F.S.?

Recommendation: Yes. The GREC Project would add a sustainable biomass fuel source that would significantly reduce coal and natural gas usage on the GRU System. The contract between the Joint Petitioners contains some protections for GRU in the event that the GREC Project is unable to procure sufficient biomass or experiences high fuel costs. (S. Brown, Ellis)

Position of the Parties

Joint Petitioners: Yes. The Project will significantly diversify GRU's existing fuel mix, which is dominated by coal and natural gas. The Project will also significantly enhance GRU's and Florida's renewable energy generation. The Project's fuel supply is sustainable on a long-term basis, with minimal or no impacts on existing users.

Stahmer: The GREC Project may contribute to fuel diversity, but not to supply reliability, and it will *not* displace a significant proportion of GRU's fossil-fueled generation with biomass fuels. Petitioners have made it very clear that they intend to increase their customer base rather than diminish demand, and they anticipate using all of GRU's current fleet as well as the new GREC.

Deevey: No position on this issue

Staff Analysis:

PARTIES' ARGUMENTS

The Joint Petitioners argue that the GREC Project will significantly diversify GRU's fuel mix, which is dominated by coal and natural gas. (GRU BR 25- 26) The Joint Petitioners state that the GREC Project will also increase the amount of renewable energy on GRU's system, and the state of Florida as a whole. (GRU BR 26) The Joint Petitioners contend the biomass fuel supply requirements of the GREC Project can be met sustainably on a long-term basis, with minimal impacts to existing biomass facilities. (GRU BR 27-29) The Joint Petitioners assert the Gainesville City Commission fully considered the range of benefits offered by the GREC Project, including for fuel diversity, fuel supply reliability, and as a hedge against potential carbon regulation. (GRU BR 29-30)

Intervenor Stahmer contends that while the GREC Project will improve the fuel diversity of GRU's system, that it will not reduce coal and natural gas consumption. (Stahmer BR 3)

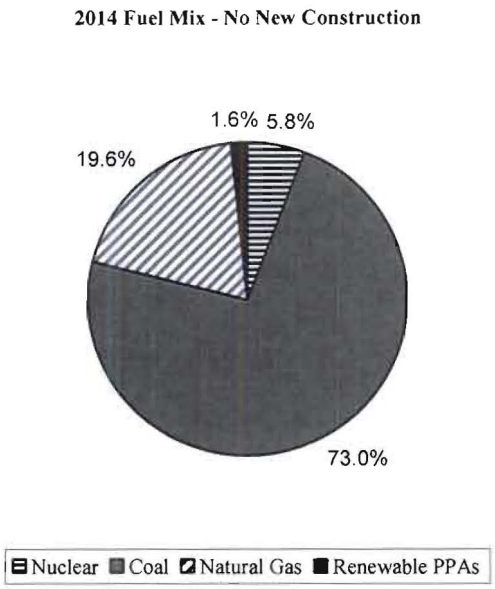
Intervenor Deevey took no position on this issue.

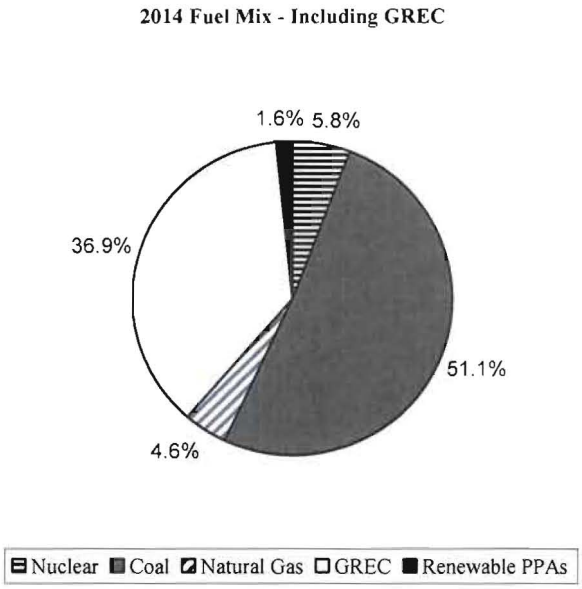
INITIAL HEARING ANALYSIS

GRU's existing system consists primarily of coal-fired baseload generation at Deerhaven Unit 2, supplemented by natural gas-fired intermediate and peaking generation from the rest of its fleet. (EXH 27, p. 3 of 3.1) The only non-fossil fueled unit is GRU's 1.4079 percent of ownership of the Crystal River 3 nuclear plant. (EXH 7, p. 34) GRU also receives a significant portion of its energy from purchased power agreements. GRU's largest single purchased power

agreement is with PEF, through which GRU receives a portion of the utility's baseload system including coal and natural gas. (EXH 7, p. 35) GRU also receives renewable energy from other purchase agreements with a local landfill gas operation and distributed solar photovoltaic systems through its Solar Feed-in-Tariff system, discussed further in Issue 5.

GRU's purchased power agreements with PEF expire in 2013. (EXH 7, p. 36) As discussed in Issue 2, GRU has sufficient generation capacity to serve its projected needs until 2023, even with the expiration of the PEF purchased power agreements. With the expiration of the PEF purchased power agreements, GRU's existing generation fleet relies more heavily upon coal, increasing its percentage share from 61.4 percent in 2008 to 73 percent of system energy by 2014. (EXH 24, p. 1 of 8) GRU's usage of natural gas is also projected to increase from 16.3 percent in 2008 to approximately 19.6 percent by 2014 without the addition of the GREC Project. (EXH 24, p. 1 of 8)





The addition of the GREC Project would significantly reduce fossil fuel consumption for GRU's customers. As illustrated in the charts above, if GRU retains all capacity from the GREC Project, the percentage of renewable generation increases from 1.6 to 38.5 percent, while coal drops from 73.0 to 51.1 percent and natural gas drops from 19.6 to 4.6 percent. (EXH 24, p. 1 of 8) The potential resale of a portion of the GREC Project's capacity reduces the fuel diversity benefits somewhat, but GRU's system would still show a notable reduction in fossil fuel usage. The economic impact of this reduction of fossil fuel usage is more thoroughly discussed in Issue 6.

Fuel Transportation

In addition to having a diverse set of fuel types from which to supply electricity to its ratepayers, utilities generally desire to have diversity in transportation and delivery mechanisms for their fuels. Multiple methods of transportation limit the risk of interruption and allow

flexibility in fuel delivery. As an inland utility, GRU is restricted to overland transport for its fuel. Currently, for deliveries of coal and natural gas, a single transit method is available for each fuel. As testified by witness Regan, there is only a single rail spur for coal, and a single pipeline for natural gas available to GRU at this time. (OTR 98-99)

With the addition of biomass, GRU would be able to use surface roads as a fuel transport system for its baseload generation, diversifying the fuel transportation methods available to GRU to satisfy its ratepayers' energy requirements. (OTR 93) Witness Levine testified that approximately 130 to 150 truck loads of biomass fuel will be required by the facility daily. (OTR 274) Witness Levine also testified that preliminary traffic analyses show that no change will occur to the level of service of several major routes, though ongoing studies are being conducted. (OTR 276)

Biomass Supply Concerns

A primary concern for development of any power plant is access to sufficient fuel supply. Unlike traditional fossil fuels, biomass would not typically be shipped for long distances from centralized production facilities. Biomass for the GREC Project would come from a region approximately 75 miles in radius around the plant site. (OTR 273) This radius is developed as a result of economics, rather than any technological limitation. A visual of the fuel catchment area, with forested areas highlighted, was provided as part of GRU's presentation during the public hearing. (EXH 29, p. 27) Multiple studies have been conducted on the area, and suggest that there is sufficient biomass for the proposed GREC Project. (EXH 27, p. 8-9 to 8-11) These studies also suggest that additional biomass would be available in the region for other proposed biomass facilities. (OTR 160-163) The economic impact of competition for biomass is more thoroughly discussed in Issue 6.

The GREC Project would use a range of biomass for fuel, including forest residue, mill residue, pre-commercial thinnings, used pallets, urban wood waste, and opportunity fuels. (OTR 255-256) Opportunity fuels include trees requiring disposal from storm damage or disease, for which the GREC Project may be eligible for a tipping fee. (EXH 27, p. 9-4 to 9-6) The GREC Project is not intended to use construction and demolition debris. (OTR 199-200)

SUPPLEMENTAL HEARING ANALYSIS

The supplemental hearing focused highly upon the issue of supply reliability with regards to biomass fuel for the GREC Project. Several studies introduced in the initial hearing, as well as additional studies, were placed in the record and discussed.

As a part of its supplemental filings, GRU introduced additional studies of biomass resources within the GREC Project's wood basket and for Florida as a whole. (EXH 40-47) Witness Schroeder estimates that approximately 5.85 million green tons of biomass material, suitable for use in the GREC Project are produced annually in the GREC Project's wood basket. (STR 335) As previously discussed, the GREC Project has an estimated annual fuel requirement of 1 million green tons, with some variability due to moisture content. (STR 337) Witness Schroeder identified several varieties of biomass that are candidates to be used as fuel for the

GREC Project. These include urban wood waste, logging residues, mill residues, and pre-commercial thinnings. (STR 338-9)

As of the date of this recommendation's filing, GREC LLC has not entered into any firm fuel contracts, but has signed a letter of intent for approximately one-third of its fuel supply with Wood Resource Recovery, LLC. (EXH 53) Witness Schroeder also testifies that GREC LLC has identified and begun negotiations with various landowners for biomass. (STR 370) Several contract measures serve to protect GRU in the event that sufficient biomass is unavailable, or not available at a reasonable price. The contract provisions and potential risks associated with the GREC Project's biomass fuel supply is described in Issue 6.

In addition to competition from existing biomass resource consumers, the GREC Project's wood basket could potentially be shared by future electric generating biomass plants. (EXH 64, BSP-000524-6) A list of projects within this area is below in Table 4-1.

Table 4-1 – Future Biomass Projects

Potential Biomass Competitors		
Project Name	**Capacity (MW)**	**Notes**
FB Energy	60	PPA with Progress
ADAGE	56	Permits Issued
Ocala Equine Energy	11	Received FECC[1] Grant
Hamilton County REC	100	American Renewables Project
Total	227	-
[1] FECC stands for Florida Energy & Climate Commission		

Witness Schroeder testified that while these biomass projects have been announced, it is possible that not all projects will actually be constructed. (STR 346) He further testified that any future biomass development will likely take into consideration the supply and demand conditions at the time they proceed. (STR 353)

In addition, Intervenor Stahmer suggests that the GREC Project will not reduce coal or natural gas usage. (Stahmer BR 3) GRU's analysis, discussed above, shows that the GREC Project allows significant reductions in coal and natural gas as a percentage of GRU's net energy for load. (EXH 24, p. 1 of 8) However, GRU's existing fossil-fueled assets could still be utilized to make off-system sales to produce net revenues. (STR 416)

CONCLUSION

The GREC Project would add a sustainable biomass fuel source that would significantly reduce coal and natural gas usage on the GRU System. GREC LLC has signed a letter of intent for approximately one-third of its fuel supply with Wood Resource Recovery, LLC. Witness Schroeder also testified that the GREC Project wood basket has sufficient biomass and that GREC LLC is in the process of identifying and beginning negotiations with various landowners for biomass.

Issue 5: Are there any renewable energy sources and technologies, as well as conservation measures, taken by or reasonably available to Gainesville Regional Utilities which might mitigate the need for the proposed Gainesville Renewable Energy Center?

Recommendation: No. The GREC Project, as a renewable resource, enhances GRU's fuel diversity and acts as an economic hedge against future carbon and renewable regulations. The GREC Project supports the Legislature's intent to promote renewables by increasing Florida's renewable generating capacity. GRU has not evaluated whether there are any conservation measures that can mitigate the need for the GREC Project, as a capacity need for reserve margin criteria does not occur until 2023. (S. Brown, Ellis)

Position of the Parties

Joint Petitioners: No. GRU has an aggressive renewable energy program, including landfill gas generation and a substantial solar feed-in-tariff. Since 2006, GRU has designed and implemented energy conservation programs using the TRC test. No additional renewable or conservation options are available to realistically mitigate the need for the Project.

Stahmer: GRU does not need additional generating capacity and energy until well into the future and would better serve its ratepayers by conserving its resources rather than depleting them by constant and increased demand. While there may be no conservation measures that can quickly supplant 100MW of energy, that is a false standard to measure against. Additional conservation and DSM measures can dramatically reduce current demand load and that is a far cheaper and less risky course of action. A false sense of urgency has been created by dangling the lure of GREC and its alleged benefits, then claiming the denial of this application would be a terrible loss as though its alleged benefits were both a certainty and a necessity. This seduction should be weighed against the enormous investment into a questionable though currently popular alternative to fossil fuels, and take into consideration the risk of ratepayers being lumbered with a white elephant posited on public land.

Deevey: There are many available conservation measures that could mitigate the need for proposed Gainesville Renewable Energy Center, and one of them would greatly mitigate the need for this Center. It consists of eliminating sales to wholesale customers the City of Alachua and Seminole Electric Cooperative.

Staff Analysis:

PARTIES' ARGUMENTS

The Joint Petitioners contend that GRU is a leader in aggressively utilizing renewable energy resources and energy conservation measures. (GRU BR 31) The Joint Petitioners state that GRU already utilizes a combination of solar photovoltaic energy and landfill gas generation to the extent available. (GRU BR 31) The Joint Petitioners state that GRU encourages cogeneration, with a combined heat and power plant. (GRU BR 32) The Joint Petitioners assert that GRU's conservation measures include a variety of programs open to all customer classes, and include government services such as traffic signals and pedestrian lighting. (GRU BR 31-32) The Joint Petitioners argue that GRU's existing renewable energy resources and conservation

efforts have delayed a strict reserve margin need for capacity, but not a need for baseload energy generation. (GRU BR 33)

Intervenor Stahmer states that GRU should take advantage of its current period of excess capacity to invest in additional DSM. (Stahmer BR 2) Intervenor Stahmer asserts that additional conservation represents a cheaper and less risky alternative to the GREC Project. (Stahmer BR 3)

Intervenor Deevey states that GRU has not conducted any examination of non-generational means of reducing need, as a need does not occur until 2023. (Deevey BR 9) Intervenor Deevey states that GRU's conservation efforts have significantly reduced the need for new capacity, until 2023, eight years after the proposed in-service date of the GREC Project. (Deevey BR 9) Also, Intervenor Deevey suggests allowing wholesale contracts with the City of Alachua and Clay Electric Cooperative to expire without renewal. (Deevey BR 9-11)

INITIAL HEARING ANALYSIS

The City of Gainesville, and by extension its municipal utility GRU, has a history of emphasizing renewable energy over conventional generation and has voluntarily entered into agreements to reduce its carbon emissions in line with the Kyoto Protocol. (OTR 87) GRU's existing renewable programs include landfill gas to energy, solar thermal, and photovoltaic rebates, using a European style solar feed-in-tariff. (OTR 51, 101, BR 19) Gainesville's Feed-in-Tariff, or FIT, provides a purchased power agreement for a 20-year term for fixed payments to distributed solar generators at a rate significantly above the current avoided cost. (EXH 27, pp. 3-6)

GRU's current DSM portfolio is based on the Total Resource Cost (TRC) test, which was adopted in 2006, and offers a wide range of conservation programs. (OTR 52, EXH 27, BR 20) GRU's energy conservation programs have resulted in an average monthly residential consumption of approximately 831 kilowatt hours. (OTR 52) Furthermore, GRU's DSM programs have resulted in cumulative energy reductions of 151 gigawatt-hours (GWh) and cumulative peak demand savings of 30 MW. (OTR 90, BR 20)

GRU asserts that its existing renewable energy and DSM programs have deferred the need for additional capacity by several years. As discussed in Issue 2, GRU does not have a need for additional capacity until 2023. As such, GRU did not perform a formal evaluation to determine whether there are any DSM or conservation measures available that could mitigate the need for the proposed GREC biomass facility, a renewable source in and of itself. (EXH 27) The decision to build the GREC Project, which is a renewable generator, was made to enhance fuel diversity and act as an economic hedge against future carbon regulation. The need for fuel diversity is discussed previously in Issue 4. The cost-effectiveness of the proposed plant is discussed in Issue 6.

SUPPLEMENTAL HEARING ANALYSIS

The supplemental hearing did not focus upon whether the GREC Project could be mitigated by renewable energy resources or improved conservation. Both the Joint Petitioners and the Intervenors agree that GRU has a record of renewable energy programs and conservation

measures that have reduced the strict reserve margin criteria requirement. Intervenor Stahmer proposes that GRU increase its conservation measures to significantly reduce existing load as an alternative to the GREC Project. (Stahmer BR 3) As discussed in Issue 2, there is no strict reserve margin need for capacity, therefore additional conservation would not mitigate the need for the GREC Project as it is based on other system reliability needs. Intervenor Deevey proposes that by allowing the expiration of wholesale contracts GRU could further reduce its capacity needs. (Deevey BR 9) Staff addresses Intervenors' concerns regarding wholesale contracts more fully in Issue 2.

The GREC Project is a renewable energy resource that can provide firm baseload capacity. (STR 206) The GREC Project qualifies as a renewable resource, and therefore, cannot mitigate itself. As GRU conducted a lengthy and extensive process of evaluating potential renewable resources, staff believes the GREC Project can be considered an available renewable energy option capable of providing baseload capacity for the GRU system.

In addition to improving the GRU system's fuel diversity, as discussed in Issue 4, the renewable characteristics of the energy produced by the GREC Project could have economic value, depending upon future carbon and renewable legislation. This economic impact is further discussed in Issue 6.

CONCLUSION

The GREC Project represents a renewable energy resource capable of supplying firm baseload capacity. As a renewable resource, the GREC Project enhances GRU's fuel diversity and acts as an economic hedge against future carbon and renewable regulations. The GREC Project supports the Legislature's intent to promote renewables by increasing Florida's renewable generating capacity. GRU has not evaluated whether there are any conservation measures that can mitigate the need for the GREC Project, as a capacity need for reserve margin criteria does not occur until 2023.

Issue 6: Is the Gainesville Renewable Energy Center the most cost-effective alternative available, as this criterion is used in Section 403.519, F.S.?

Recommendation: There is considerable uncertainty about the economics of this project. The GREC Project would result in a loss of approximately $56 million based on a CPWRR analysis using current environmental regulations, fuel forecasts, and market assumptions. However, the GREC Project could result in a savings of approximately $448 million if pending environmental regulations are enacted and GRU resells half of the capacity at full contract price. Therefore, the GREC Project acts as a hedge against potential cost increases associated with future regulation of carbon emissions and renewable energy. (S. Brown, Ellis, Springer)

Position of the Parties

Joint Petitioners: Yes. The Project is the most cost-effective generation expansion decision that GRU can possibly make to meet its need for reliable, sustainable electric power. The Project's LCOE is lower-cost than conventional alternatives, and the CPWRR impacts are lowest with the Project under all realistic scenarios.

Stahmer: The GREC Project is a highly speculative venture and the cost-effectiveness of a 100 MW woody biomass plant is dubious given the increasing regulatory climate regarding all resources. In the immediate moment, woody biomass may seem more cost-effective than natural gas-fired alternatives; however it is not more cost-effective than conservation and DSM. GREC itself is not a cost-effective enterprise for the ratepayers given what may be an unusually exorbitant basis for calculating charges to ratepayers for energy produced by GREC and Petitioner's intentions to promote a larger customer base. Reducing consumption is the most effective way to reduce one's carbon footprint. As stated above, recent federal regulatory action also suggests that woody biomass will be subject to controls not contemplated by Petitioners.

Deevey: No, because they have grossly underestimated the future costs of woody biomass fuel to be used at the Center, Petitioners have failed to confirm that the proposed project is the most cost effective alternative.

Staff Analysis:

PARTIES' ARGUMENTS

The economics of GRU's PPA with GREC LLC were analyzed using three different methods: LCOE, CPWRR, and Expected Value Analysis. (GRU BR 34)

The Joint Petitioners contend that when compared to multiple alternative technologies to be constructed by 2014, in a variety of cases and scenarios, resulting in the GREC Project being the most cost-effective excluding coal. (GRU BR 34-35) The Joint Petitioners assert that while the GREC Project is not as cost-effective in an LCOE analysis as a pulverized coal unit, it is unlikely that a coal unit would be permitted in Florida. (GRU BR 34-35)

The Project and PPA were also analyzed using a CPWRR. (GRU BR 35) Regarding the CPWRR, GRU states it does not agree with the usage of a "No New Construction until 2023"

case as a "base case." (GRU BR 35) The Joint Petitioners believe that the most appropriate "base case" is the Regulated CO_2 Case with Full Contract Resale. (GRU BR 35-36) The Joint Petitioners assert that the CPWRR analysis shows that GRU's customers will receive significant savings, and that only unrealistic assumptions result in net present value costs. (GRU BR 36) The Joint Petitioners state that, among other factors, the GREC Project frees up existing utility assets to potentially be used for economy sales by GRU to other utilities, and reducing costs. (GRU BR 36-37)

Finally, The Joint Petitioners state that GRU analyzed the GREC Project with respect to the risks mitigated by, and risks taken with, using an Expected Value Analysis performed by Witness Regan. (GRU BR 37) The Joint Petitioners state that GRU finds that this analysis, under a range of scenarios, shows that the GREC Project is cost-effective. (GRU BR 37)

Intervenor Stahmer argues that the GREC Project is highly speculative, and that the cost effectiveness is uncertain given the current regulatory climate. (Stahmer BR 3) Intervenor Stahmer asserts that the GREC Project is not cost-effective for ratepayers due to the contract pricing method. (Stahmer BR 3-4) Intervenor Stahmer argues that the Joint Petitioners have not included the impact of forecasted price increases for the biomass fuel to be consumed by the GREC Project. (Stahmer BR 2-3) Intervenor Stahmer contends that the negotiated contract between GRU and GREC LLC increased the capital costs of the GREC Project significantly compared to the original bid. (Stahmer BR 5-6) Intervenor Stahmer suggests that construction indicies are an insufficient explanation for the capital cost increase. (Stahmer BR 13-16)

Intervenor Deevey contends that the cost effectiveness of the project hinges upon the cost of the biomass fuel to be consumed by the GREC Project. (Deevey BR 2) Intervenor Deevey suggests that the price of biomass proposed by the Joint Petitioners is not reasonable, as biomass prices would increase significantly with the enactment of a renewable portfolio standard (RPS), either at a state or federal level. (Deevey BR 2) Intervenor Deevey asserts that several studies show an RPS would increase demand for forestry products, and result in price increases. (Deevey BR 5) Intervenor Deevey states that the Joint Petitioners have not demonstrated that biomass fuel prices will remain indexed to inflation, but rather could face large price increases from potential RPS legislation. (Deevey BR 8)

INITIAL HEARING ANALYSIS

In rendering its unanimous decision to approve the GREC Project, staff believes the Gainesville City Commission considered all aspects of the impact the GREC Project would have on its system. Multiple factors contributed to the GREC Project approval. A significant focus was on the ability of biomass to provide baseload energy. (OTR 62) The City Commission also considered the ability of GREC to provide a hedge against future carbon legislation, given GRU's current coal heavy fuel mix. The City Commission, as part of its policy to encourage the development of renewable resources, directed GRU to solicit proposals for baseload renewable resources, eventually resulting in the selection of the GREC Project by a unanimous vote. (OTR 49-50) As a result of this process, staff believes the GREC Project can reasonably be considered the least cost biomass generator commercially available. Moreover, due to the timing of the GREC project, it may be eligible for significant economic benefits from the American Recovery and Reinvestment Act of 2009. (EXH 7, p. 8)

Contract Payment Terms and Protections

The PPA between GRU and GREC LLC represents a performance agreement, in which capacity payments are paid on a dollar per megawatt-hour basis, instead of the traditional kilowatt per month basis. (OTR 128) The contract payments can be divided into two generic groups: (1) non-fuel energy charges based upon the availability of the unit, and (2) fuel charges based upon the dispatch of the unit. (OTR 129)

The non-fuel energy charges can be broken down into the capacity payment, which will be adjusted based upon the construction price index difference from the signing of the contract and the beginning of construction, and the fixed operations and maintenance expenses, which will not be escalated. Prices for non-fuel energy charges are based upon the availability of the unit, which has minimum requirements outlined in the contract, and performance incentives to maintain that availability. (EXH 27, p. 9-3) The non-fuel energy charge will be paid regardless of the actual energy output of the facility, and are thus a 'sunk' cost when considering economic dispatch. (OTR 129) Based upon GRU's economic analysis of the GREC Project, these charges will constitute the majority of payments to the facility for almost the entire 30-year term. In the event that the Facility is unable to operate, GRU would not be responsible for any payments. However, if the Facility is able to operate, but GRU opts not to dispatch it, GRU would still be required to pay the non-fuel component of the charges in the amount of energy as if the Facility was dispatched. The fuel charges are based upon a combination of the variable operations and maintenance, escalated at 2.50 percent, and the biomass fuel itself, which was escalated for analysis purposes at the consumer price index. Combined, the fuel charge would be used for dispatch purposes, and is comparable to that of a coal unit. (OTR 124)

The PPA between GRU and GREC LLC includes multiple contractual protection mechanisms to ensure that GRU's ratepayers are safeguarded from non-performance by the GREC Project. Protection is also provided for if the facility suffers from non-performance, with GRU able to draw upon financial instruments to purchase replacement power. (OTR 150-151) If GREC LLC goes into default the contract becomes void.

Levelized Cost of Electricity (LCOE) Analysis

The GREC Project was compared to several fossil-fueled alternative units in a levelized cost of electricity analysis performed by witness Kushner. (EXH 22) LCOE serves well to screen a variety of technologies on an 'apples to apples' basis, meaning in the case of electrical utilities that similar technologies are approximately interchangeable with an existing system. (OTR 307) The four alternate units include a combustion turbine, a combined cycle unit, a pulverized coal unit, and a pulverized coal unit with carbon capture and sequestration (CCS) equipment. (OTR 302) Of the four alternate units utilized in GRU's analysis, only the coal-fired units are considered baseload generation similar to the GREC Project.

The LCOE analysis performed by witness Kushner included a range of scenarios, including variations in fuel prices, capital costs, and carbon regulation for the alternative units. (EXH 22) Additional scenarios were performed for each alternative unit. (OTR 302) For example, the analyses included multiple capacity factors for the base case, and the sensitivities on fuel, capital cost, and carbon regulation were conducted at a 90 percent capacity factor for all

units as well. Based on these scenarios, the pulverized coal unit is the only alternative more cost-effective than the GREC Project, excluding both carbon cases. (OTR 309-310)

This form of LCOE analysis may be misleading due to several assumptions utilized. GRU's LCOE analysis used the assumption that any alternative unit would be constructed so as to have a commercial in-service date identical to the proposed GREC Project, by January 1, 2014. (EXH 22) Providing for permitting and construction time, neither of the two coal-fired units proposed as alternatives would be able to begin operation by the 2014 timeframe. (OTR 309) Even if construction timing was not a factor, witness Kushner states that it is unlikely that a new coal unit would be approved in Florida given the current regulatory climate. (OTR 309) The remaining units, both natural gas-fired, likely could be constructed by 2013. However, only the natural gas-fired Combined Cycle unit is designed to operate in a similar fashion to GREC, as a baseload unit.

The GREC Project was assumed for all comparisons to have a 90 percent capacity factor, which was derived from the performance requirements of the purchased power contract. Table 6-1, below, provides a comparison between the performance of those units able to enter service by 2013 and the GREC Project at an identical capacity factor. Due to confidentiality, the LCOE values are compared on a percentage basis to GREC's LCOE. As shown in Table 6-1, the GREC Project still represents the least cost unit in an LCOE analysis.

Table 6-1 - Levelized Cost of Electricity at Identical Capacity Factors[7]

GREC and Alternative Unit Comparison			
Scenario	**GREC**	**Combined Cycle**	**Combustion Turbine**
Capacity Factor	90%	90%	90%
Percentage of LCOE Compared to GREC			
Base Case	100%	106%	117%
High Fuel	100%*	110%	122%
Low Fuel	100%*	100%	110%
High Capital	100%*	108%	118%
Low Capital	100%*	103%	115%
Regulated CO_2	100%*	125%	139%
High Regulated	100%*	198%	224%
* - The GREC LCOE Value does not change between scenarios, instead holding the 'Base Case' value constant. GRU did not model any changes in biomass fuel price, capital cost of the GREC Project, or impact of carbon regulation on biomass fuel prices.			

The analyses presented in Table 6-1 consist of the LCOE over the entire 30-year term of the PPA. As a result, it did not model possible short-term rate impacts of the units analyzed. On an annual LCOE basis, the GREC Project became more cost effective than the natural gas-fired combined cycle unit by 2027 at a 90 percent capacity factor. (EXH 22) When compared to the combustion turbine operating at a 90 percent capacity factor, the GREC Project did not begin to produce energy at a lower cost per kilowatt-hour until after 2021. (EXH 22) Such results

[7] EXH 22.

indicated that the initial capital costs of the GREC Project were not offset by fuel savings until 7 to 13 years into the contract term.

An LCOE analysis is useful as a screening tool once a decision has been made to construct a unit and can assist in selecting between similar technologies. (OTR 307) However, the LCOE analysis conducted by GRU assumed a need exists to construct a unit of approximately 100 MW capacity by 2014. This is not the case for GRU, as no need exists until approximately 2023 based upon reserve margin criteria, as discussed in Issue 2. If the GREC Project is not constructed, it is unlikely that one of the alternate units mentioned above would be constructed to begin service by 2014. As a result, staff believes it is more appropriate to compare the GREC Project to a scenario of no new construction until 2023, which is more easily conducted using a CPWRR analysis of GRU's revenue requirements.

Cumulative Present Worth Revenue Requirement Analysis

GRU provided a CPWRR analysis for GRU's system with the GREC Project and with no new construction until 2023. (EXH 7, pp. 56-58, pp. 98-104) Multiple scenarios were conducted including a resale of half of the GREC Project's capacity for ten years, and the estimated impact of pending carbon legislation. Staff had originally requested additional scenarios to be conducted using the CPWRR analysis method, but GRU was initially unable to provide them due to time constraints. (EXH 7, pp. 55-56)

The 'Base Case – No Resale' scenario originally resulted in a net present value cost of approximately $100 million by the year 2043. (EXH 24, p. 4 of 8) This value was later revised, as discussed below. GRU's analyses indicated that the only scenarios where the GREC Project could provide meaningful economic benefits are if pending legislation regarding CO_2 emissions is enacted.

GRU did not include any new construction for the 30-year term of the GREC PPA, but as witness Regan stated, GRU's analysis included projected market costs for capacity and energy in its projected requirements. (OTR 128) Typically, "filler units" are used to represent future capacity additions that are outside of the utility's normal planning period. Filler units consist of natural gas-fired combustion turbines or combined cycle units dependent upon projected capacity and energy requirements. Instead, the use of market purchases for energy began in 2024 with the retirement of Deerhaven Unit 1 and increased as other units on the GRU system were retired. (EXH 7, pp. 78-90) The most significant increase occurred in 2031, with the retirement of Deerhaven Unit 2, when market purchases for power represented approximately 30 percent of net energy for load. In addition to market purchases, the existing units on GRU's systems were heavily utilized, especially in the outer years. For example, the Deerhaven Combustion Turbine Unit 3 was modeled at a capacity factor equal to 96.3 percent in the no new construction scenario by 2032. (EXH 7, pp. 65-77)

Staff believes it is unlikely that GRU would operate its units in this manner, and that it is more likely that new, efficient units would be constructed at some point during the period to meet customer demand. Also, witness Regan testified that GRU hopes to get more than 50 years out of the Deerhaven Unit 2, which would push the retirement date of this unit further into the future. (OTR 111, 112) Due to the lack of the use of "filler units," variability of retirement dates,

high amount of market purchases, and unusually high capacity factor for peaking resources, staff believes the CPWRR analyses conducted by GRU provides no clear answer to the economic viability of the GREC Project. However, the analyses do indicate that the primary driver of estimated savings comes from the estimated impacts associated with pending environmental regulations affecting CO_2.

The enactment of pending carbon legislation will have the greatest impact upon the cost-effectiveness of the GREC Project. (EXH 24, p. 4 of 8) If the GREC Project is considered carbon neutral, and is able to reduce the requirement of GRU to purchase carbon credits or allocations, then the facility may provide significant economic benefit. As testified by witness Regan, the GREC Project acts as a hedge against potential carbon legislation that may have a negative effect upon the cost effectiveness of coal-fired generation, which GRU heavily relies upon. (OTR 88, 98)

The GREC Project's output would assist GRU in meeting its voluntary carbon emission goals under its policy statement to meet the Kyoto Protocol. (OTR 123) In addition, the GREC Project would operate as a hedge against possible future regulation of carbon emissions at the federal level. (OTR 139-140) House Resolution 2545, or the Waxman-Markey Bill, was used by GRU to develop the economic impact of carbon legislation. (OTR 302) In addition, the GREC LLC PPA provides all the environmental attributes associated with the facility to GRU. (OTR 148-9) The impact of possible sales of these credits is discussed further, below.

While GRU's economic analysis is based upon pending legislation, the regulation of carbon emissions and federal renewable portfolio standard are not guaranteed to remain in its current draft form, or be implemented into law. Significant changes, delays, or withdrawal of the pending legislation could impact the anticipated rate impact of the GREC Project. For example, the Waxman-Markey Bill and multiple federal and international organizations consider biomass to be a renewable and sustainable resource. In fact, the collection and combustion of biomass can serve to reduce carbon emissions by reducing methane emissions related to rotting biomass. (OTR 135) However, biomass generation typically involves the use of fossil fuels for transport of fuel to the facility, which amounts to approximately four percent of the equivalent carbon emissions had the fuel been coal. (OTR 135) As a result, until legislation is enacted, there will be some uncertainty as to whether biomass facilities would be considered fully carbon neutral, or partially so dependent upon fuel source and transportation.

Customer Bill Impact

The customer impact of the GREC Project is affected greatly by the degree to which GRU is able to resell capacity at or near the full contract price, and whether pending carbon legislation is enacted. The customer rate impact numbers are lower per average GRU customer, as they use approximately 831 kWh monthly, compared to the state average of approximately 1,200 kWh per month. (OTR 142-143) In addition, GRU anticipates this value to decrease in the future. (OTR 159)

Without resale and under current regulations, the average residential customer on GRU's system was originally estimated to see an initial bill increase of $18.27 (or 17.2 percent) per month starting in 2014. (EXH 31) The rate impact was originally estimated to be reduced to

$7.33 per month (or 6.7 percent) bill increase, assuming resale at full contract price. Pending carbon legislation, if enacted, reduces the initial and long-term customer bill impact of the GREC Project significantly. The initial impact was originally estimated to be as low as $4.13 (or 3.4 percent) per month in the carbon regulated, resale scenario. However, these values were all later revised, as discussed below. Based on the above, the purchased power from the GREC project was projected to increase the cost of electricity for GRU's customers. However, the Commission does not have rate-setting authority over the GRU and therefore any rate impact would be the result of the Gainesville City Commission's policy decisions.

Resale of Capacity and Energy

As mentioned above, GRU plans to resell 50 MW of capacity from the GREC Project for the first ten years of the contract. Several utilities have expressed interest in purchasing this capacity, including Florida Municipal Power Agency, Orlando Utilities Commission, Reedy Creek Improvement District, and City of Lakeland. (OTR 193) While these utilities, or others, may purchase portions of the GREC Project's capacity, it is not known if GRU would be able to secure resale purchased power agreements for the full price of the contract that GREC LLC is guaranteed by GRU. Staff believes it is likely that GRU would be able to resell capacity from the GREC Project, and that the no resale scenario represents a worst-case situation.

In regard to the short-term resale of the GREC Project's capacity as previously mentioned. GRU originally did not consider the possibility of resale of existing system capacity during the early period of the PPA. The value of this stranded capacity is discussed further, below.

Biomass Supply Considerations

GREC LLC intends to enter into several contractual agreements for 'call' options on biomass sufficient for the operation of the GREC Project. (OTR 256) It also suggests it is in the position to enter into more binding arrangements, but it has not executed any fuel contracts, at this time. (OTR 258-259) GREC LLC also states its intention to avoid locking in prices for the full amount of biomass required by the GREC Project, as opportunity fuels may become available due to a storm event, land development, or other situation. It is conceivable that in some situations, the GREC Project would be paid a tipping fee to accept wood in these situations. (OTR 249)

While sufficient supply of biomass may be available for the GREC Project, the existence of competition for the resource may result in price increases. (OTR 163-164; 249; 268-269) GRU proposes that biomass fuel will escalate at the level of the Consumer Price Index, based upon the usage of labor and equipment required for forestry operations. (OTR 249)

GRU intentionally has selected a larger biomass unit with an earlier in-service date in order to take advantage of the current biomass market. By being the "first in the door," the GREC Project will be able to access a broader fuel supply than future competitors, or discourage future development by contracting all the available fuel. (OTR 42, 12/09/09 Public Meeting) A notable possible competitor is a similar facility to GREC being planned in Hamilton County by American Renewables. (OTR 240) This facility, to be known as the Hamilton County

Renewable Energy Center (HCREC), would feature a 100 MW biomass plant approximately half-way between Jasper and White Springs along Route 41. (OTR 267) This places the HCREC facility well within the 75 mile radius of the GREC Project's fuel catchment area previously discussed. (OTR 266-267) Witness Levine testified that at least two other planned biomass facilities are being planned, one in Gadsden and the other one in Hamilton County. (OTR 271) Witness Levine further testified that announcements of future biomass facilities tend to out-number the actual development and construction. (OTR 272)

In its planning process, GRU and GREC LLC expected a reasonable level of competition for its biomass fuel resource, and included the effects of increased pressure on the prices of biomass due to several planned biomass facilities. Witness Levine testified that current and future competition was considered in the planning process, and is confident that the confidential biomass price can be met. (OTR 267-269)

As testified by witness Levine, there is also risk sharing built into the contract's fuel provisions. (OTR 281-282) A confidential target price for biomass is established based upon the contract, which is then compared to the actual price for fuel paid during the period. GREC LLC would receive approximately 15 percent of the difference between the target and actual values, either as savings if below the target or as additional cost if above. (OTR 281-282)

Financial Assumptions

GRU's financial assumptions for the GREC Project include an anticipated capital structure consisting of 100 percent debt financing using primarily long-term tax-exempt municipal bonds. (OTR 85) GRU structured the transaction with GREC LLC as a purchased power agreement (PPA) rather than GRU obtaining an equity share in the facility. The annual costs for GRU's participation in the project are not tied to an investment in a self-build asset. (OTR 95) GRU is the counterparty to the PPA upon which GREC LLC will obtain project financing. (OTR 95) Standard & Poor's and Moody's have issued bond ratings to GRU of AA and Aa2, respectively. (OTR 95)

GRU's other financial assumptions include an annual rate of 4.2 percent for the long-term tax-exempt municipal bond rate, interest during construction rate, and present worth discount rate. (OTR 85) Additionally, a 2.5 percent annual percentage rate was used for the general inflation rate and the escalation rate that was applied to both capital costs and O&M costs. (OTR 85) These financial assumptions as applied are consistent and comparable with financial assumptions used in other recent need determinations that were approved by the Commission.[8] There was no evidence presented in the record that disputes the reasonableness of these financial assumptions. Based on this review, staff recommends that the financial assumptions used for this evaluation are reasonable.

[8] Order No. PSC-09-0111-FOF-EM, issued February 25, 2009, in Docket No. 080614-EM, In re: Petition to determine need for Greenland Energy Center Combined Cycle Conversion in Duval County by JEA (5 percent original cost rate/7 percent revised cost rate) and Order No. PSC-06-0457-FOF-EM, issued May 24, 2006, in Docket No. 060155-EM, In re: Petition for determination of need for proposed Stanton Energy Center Combined Cycle Unit B electrical power plant in Orange County, by Orlando Utilities Commission (5.25 percent cost rate including insurance costs and issuance fees).

SUPPLEMENTAL HEARING ANALYSIS

The supplemental hearing featured significant updates, including additional information on potential carbon and renewable legislation, fuel forecasts, market sales, and other factors. Concerns of high biomass prices were a focus of Intervenor's arguments. Below, staff discusses arguments raised in Issues 3 and 6 by the Joint Petitioners and Intervenors. Staff notes that both the Joint Petitioners and Intervenor Deevey suggest that enactment of a renewable portfolio standard is likely during the contract period.

Intervenor Stahmer also raises issues concerning differences in the estimated capital cost of the project between the original binding proposal and the final negotiated purchase power agreement before the Commission in this need determination. (Stahmer BR 10-19) Staff believes that the matter before the Commission, in regards to cost-effectiveness, is the final negotiated purchased power agreement, signed by GRU and GREC LLC, and not the original binding proposal.

As mentioned above, the original estimates for the GREC Project, ranging from a cumulative net present value cost of $100 million to a benefit of $400 million depending upon the case and scenario described, have been revised by GRU. As part of the supplemental testimony process, a revision to the CPWRR analysis was provided to staff in Interrogatory No. 57. (EXH 70, 001598-604) This revision corrects several spreadsheet errors, and has an approximate impact on the scenarios ranging from $7.7 million to $1.9 million in additional cumulative net present value savings, dependent upon the specific case and scenario.

Updated Cumulative Present Worth Revenue Requirement Analysis

As discussed in Issue 3, staff conducted extensive discovery regarding additional components of the CPWRR analysis, which results in significant differences from the original analysis. These differences, as outlined below, include a new fuel forecast, off-system sales from existing assets, market sales of the GREC Project, and consideration of renewable energy credits. In addition to modifying the overall CPWRR analysis, these factors also change the rate impact of the GREC Project.

Fuel Forecast Update

GRU based its original fuel forecast on the Annual Energy Outlook 2009 (AEO2009) published by the Energy Information Agency (EIA). (EXH 27, p. 7-1) Since the original technical hearing, the EIA has released a preliminary version of the Annual Energy Outlook 2010 (AEO2010). (EXH 64, BSP-000532-4) GRU provided an updated CPWRR analysis, with multiple iterations, based upon this new forecast for natural gas and coal. The values for uranium and carbon credits were left unchanged from the previous analysis. The values for natural gas and coal show a small increase in the early years of the fuel forecast, with the outer years showing significant decreases. This has the overall effect of increasing the cost-effectiveness of the biomass facility in the short-term, while decreasing it over the full term of the contract.

Existing Assets and Potential Sales

GRU's new analysis provided for the potential value of off-system sales from existing assets during periods in which GRU has excess capacity. (STR 417) Witness Bachmeier testified that it is good utility practice to conduct wholesale power sales that are economically beneficial. (STR 419) With the GREC Project, GRU has a reserve margin in excess of 30 percent until 2023 approximately. (EXH 24, p. 3 of 8) Witness Hanrahan stated that many of GRU's peaking units are older, relatively inefficient combustion turbines that have a high energy production cost. (STR 265) Potential sales would reduce the cost impact of the GREC Project, and are considered in the updated analysis. Power sales from the GREC Project itself are discussed below.

Resale of GREC Facility's Capacity and Energy

As discussed above, GRU assumes that it will be able to market the GREC Project, either at the full contract rate or at a lesser market value. In the updated analysis, GRU provided estimated values for a market-based sale of firm capacity and energy from the GREC Project, using GRU's contract with Progress as a model. (EXH 64, BSP-000531-2) The estimated wholesale rate is less than the total contract rate to GRU, but payments from a potential contract would reduce the overall impact of the GREC Project. This change impacts the "No Resale" scenario only, which is now referred to as the "Market Resale" scenario.

Renewable Energy Credits

The contract between GREC LLC and GRU provides the environmental attributes of this generation to GRU as part of the contract price. (OTR 148-9) The Waxman-Markey Bill, used for the Regulated CO_2 Case in the analysis, includes a renewable energy standard. The potential value of renewable energy credits (RECs) reduces the cost of the GREC Project. (STR 454-6) The Waxman-Markey Bill includes an Alternative Compliance Payment (ACP) of $25/MWh, increasing with inflation, that represents a cap on the cost of RECs. (STR 456) GRU provided a CPWRR analysis of the GREC Project including a REC value of $5/MWh and $25/MWh, to include a conservative estimate and maximum value. (EXH 65, BSP-000638-9) Staff has selected the more conservative $5/MWh to be used in the Regulated CO_2 Case discussed in this recommendation. REC values are not included in the Base Case, though GRU has previously sold some RECs in voluntary markets for $4/MWh. (EXH 66, BSP-000652-3)

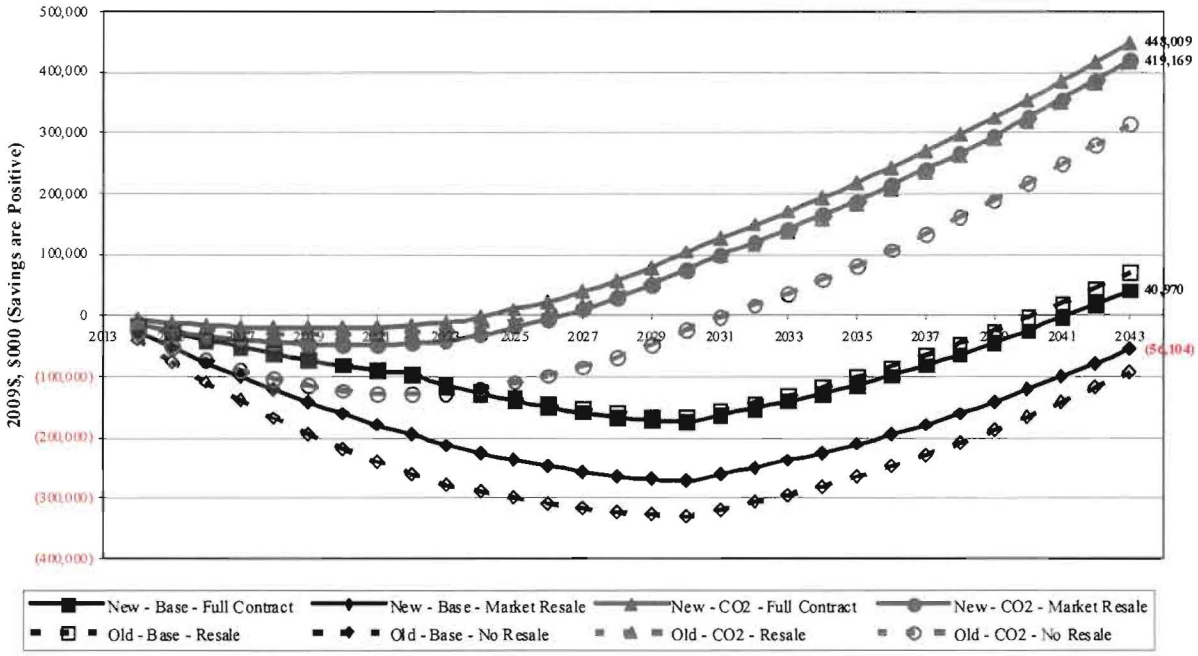
Delay Case

As an additional case, GRU has also provided the Delay Case. Discussed at the Agenda Conference, the contract between GREC LLC and GRU includes a clause that increases the contract rate by approximately $8.10/MWh if the GREC Project does not receive the Investment Tax Credit (ITC). (OTR 269-70) The ITC represents an opportunity to immediately recoup approximately 30 percent of the capital cost of a renewable project. This would result in an increase of the GREC Project's net present value cost by approximately $54 million for the Full Contract Resale scenario, and $36 million for the Market Resale scenario. The increase in costs translates to a rate impact of $1.25 per month for the average GRU residential customer initially.

Cumulative Present Worth Revenue Requirement Analysis Summary

In total, there have been significant changes to each of the scenarios and cases described at the original hearing. The "Resale" scenario has now been relabeled "Full Contract," but features no fundamental difference beyond the inclusion of sales from existing assets and revised fuel forecast. The "No Resale" scenario, which assumes no resale of power from the GREC Project, has been replaced with the "Market Resale" scenario, which features market-based resale of 50 MW of the 100 MW capacity until 2023. The final results of each Case and Scenario's CPWRR Analysis, compared to the Original Estimates, can be found below in Figure 6-1.

Figure 6-1 – CPWRR Analysis vs. No New Construction until 2023 (EXH 87)



Overall, the updated analysis featured a general improvement in the cost-effectiveness of the GREC Project. The cases and scenarios described above have important assumptions that influence their cost-effectiveness. Foremost, all scenarios now assume some form of resale of the GREC Project's capacity, either at the full contract price or at a market-based price. Staff considers it likely that GRU would be able to resell power, but whether they are able to achieve the estimated rates will have a significant impact upon the cost of the GREC Project. As discussed above, GRU has not yet executed any contracts, though multiple utilities have expressed interest in purchasing capacity and energy from the GREC Project. (EXH 61, 62)

The Regulated CO_2 case described above envisions carbon and renewable legislation based upon the Waxman-Markey Bill. As a part of its supplemental filings, GRU included an update on this legislation, as well as multiple other legislative efforts, at a state and federal level, to regulate carbon emissions or renewable energy. (STR 454-66) Witness Regan also describes findings by the Environmental Protection Agency (EPA) that has made an Endangerment

Finding regarding greenhouse gas emissions, including carbon dioxide. (STR 458-9) At this time, however, no additional environmental regulations on renewable energy or carbon emissions have passed or are set to be enforced on a federal or state level.

The Joint Petitioners suggest that the form of analysis utilized above is inappropriate, because resale of the contract at full price, and regulated CO_2 represent the most appropriate "Base Case." (GRU BR 35-36) Staff uses the term "Base Case" to refer to scenarios performed under current environmental regulations only. These include a Full Contract Resale scenario, a Market Resale Scenario, and a No New Construction Until 2023 scenario. Staff believes that by comparing the cost to GRU between No New Construction Until 2023 and scenarios with the GREC Project are an objective analysis method that demonstrates the impact of the GREC Project upon the cost effectiveness of GRU's system.

Expected Value Analysis

GRU proposes an additional form of cost-effectiveness analysis, referred to as a probabilistic risk analysis, or Expected Value Analysis. (STR 433) This process includes estimating the potential financial cost of a series of risk factors, what impact the GREC Project may have on the risk factors, multiplying the GREC Project's impact by a percentage, and then summing the result. (STR 434-5) Witness Regan states that by such an analysis, with assumptions biased against the GREC Project, the GREC Project represents a risk adjusted benefit to cost ratio of approximately 2 to 1, or approximately $70 million. (STR 435-6) Witness Regan proposed another Expected Value Analysis, with what he describes as mid-range assumptions, and it results in a benefit to cost ratio of greater than 10 to 1, or approximately $279 million. (STR 438)

Staff believes that the Expected Value Analysis, while useful for risk analysis, does not reflect the fact that the outcome of a scenario is one result or another. For example, pending carbon legislation, or functionally similar legislation, will be enacted, or it will not. Witness Regan suggests in his first scenario, described as biased against the GREC Project, that carbon regulation has a ten percent chance of occurring, and in his second scenario, described as mid-ranged, a 50 percent chance of occurring. (EXH 57; 59) Staff believes that a more clear presentation of this is to compare the cost impacts of full scenarios with and without carbon regulation, as has been conducted above in the CPWRR Analysis in the Base Cases and Regulated CO_2 Cases. The CPWRR Analysis allows the Commission to weigh for itself what it believes the likelihood of these conditions will be in the future.

Customer Bill Impact Changes

With the updated CPWRR analysis, GRU provided an updated rate impact to reflect the changes discussed above. These are summarized in Figure 6-2, below.

Figure 6-2 – Initial Residential Monthly Bill Impact ($/831 kWh-mo) (EXH 87)

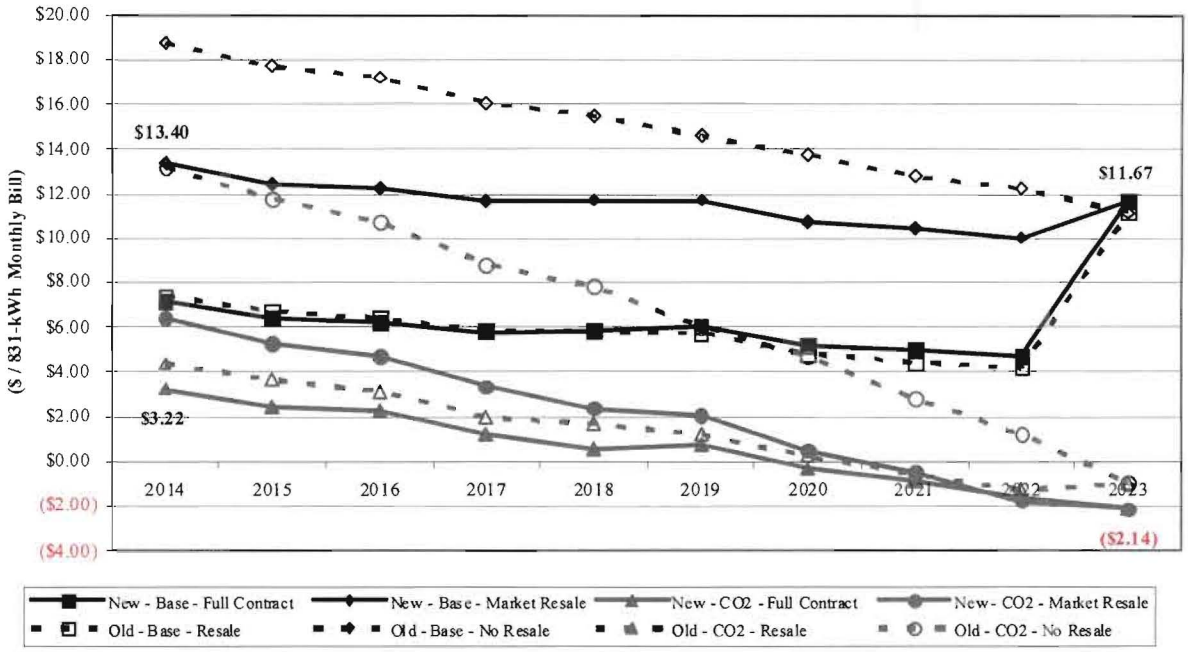


Table 6-2 - Initial Residential Monthly Bill Impact Summary (EXH 87)

Initial Rate Impact in 2014 ($/831 kWh-mo)				
Scenario	**Revised Original Estimate**		**Current Estimate**	
	Title	**Value**	**Title**	**Value**
Base Case	Resale	$7.35	Contract Resale	$7.13
	No Resale	$18.75	Market Resale	$13.40
Regulated CO_2	Resale	$4.36	Contract Resale	$3.22
	No Resale	$13.18	Market Resale	$6.41

Based on the above, the purchased power from the GREC project was projected to initially increase the cost of electricity for GRU's customers. However, the Commission does not have rate-setting authority over the GRU and therefore any rate impact would be the result of the Gainesville City Commission's policy decisions.

The Commission will not review the final costs or establish rates resulting from the proposed GREC project because GRU is not rate-regulated by this Commission. As such, it is the Gainesville City Commission that is ultimately responsible to its citizens-ratepayers for all rate impacts associated with the project. The record indicates that both the Gainesville City Commission and GRU made many efforts to inform GRU's customers that their rates could increase when the plant is operational. Staff would expect that the Gainesville City Commission will review the project's total costs as well as other impacts associated with the project such as increased jobs, property taxes, traffic patterns, and future off-system power sales before establishing retail electric rates for its citizens.

Biomass Supply Concerns and Contract Protections

As a part of its supplemental filings, GRU introduced additional studies of biomass resources within the GREC Project's wood basket and for Florida as a whole. (EXH 40-47) Witness Schroeder estimates that approximately 5.85 million green tons of biomass material suitable for use in the GREC Project are produced annually in the GREC Project's wood basket. (STR 335) As previously discussed, the GREC Project has an estimated annual fuel requirement of one million green tons, with some variability due to moisture content. (STR 337) Witness Schroeder identified several varieties of biomass that are candidates to be used as fuel for the GREC Project. These include urban wood waste, logging residues, mill residues, and pre-commercial thinnings. (STR 338-9)

As of the date of this recommendation's filing, GREC LLC has not entered into any firm fuel contracts, but has signed a letter of intent for approximately one-third of its fuel supply with Wood Resource Recovery, LLC. (EXH 53) Witness Schroeder also testifies that GREC LLC has identified and begun negotiations with various landowners for biomass. (STR 370)

The GREC Project, as discussed in Issue 4, requires approximately one million green tons of biomass annually to operate annually. (STR 337) Intervenors raised significant concerns that the biomass prices utilized for the cost-effectiveness analysis are unreasonable. (Deevey BR 2; Stahmer BR 2-3) Several contract measures serve to protect GRU in the event that sufficient biomass is unavailable, or not available at a reasonable price. If the GREC Project is unable to find sufficient biomass to operate, it would be considered unavailable, and GRU would not be responsible for any payments, either energy or non-energy.

In the event that biomass prices are higher than projected by GRU, the cost of the GREC Project would increase, with a cost-sharing mechanism being utilized, as described above. Under the contract, GRU has the option to dispatch the GREC Project, which can reduce the unit's output. (STR 413) A reduction in dispatch would reduce fuel consumption, thereby reducing fuel costs and avoiding more expensive biomass purchases. However, GRU would still be responsible for non-energy payments, as the GREC Project would be considered available during this time period. (STR 413) In any of these instances, costs to GRU would increase beyond those assumed in the cost-effectiveness analysis above.

Credit Ratings

Concerns were raised about the proposed GREC Project's potential effect on GRU's credit ratings. (STR 168; STR 170) These concerns focused on GRU's fuel diversity, credit rating agency imputed debt, energy sales of excess capacity, and higher debt obligations. (STR 222; STR 551-552; STR 299-300; STR 227-232) Witness Hanrahan stated that the GREC Project would secure a new fuel source giving the utility greater fuel diversity to address a stated concern of both Standard & Poor's (S&P) and Moody's. (STR 222) Witness Hanrahan asserted that in several meetings with both S&P and Moody's, the credit rating agencies expressed concerns about GRU's reliance on fossil fuels with regard to carbon regulations. (STR 296)

Witness Hanrahan stated that the additional costs that would be incurred as a result of this project are not considered debt of GRU since the proposed GREC Project is structured as a

purchased power contract with no obligations to GRU in the event the power is not produced. (STR 227-232) Witness Regan testified that, based on representations made in meetings with the credit rating agencies, the imputation of debt would not be applicable to GRU. (STR 551-552) Additionally, witness Regan asserted that only a contract default would elicit security provisions estimated in the area of about six months of payments applicable to GRU. (STR 551-552)

Additional Commissioner concerns were raised about the credit rating agencies' view of the resale viability of the excess contracted power by GRU. (STR 299-300) Witness Hanrahan asserted that the perception of the credit rating agencies is that the excess contracted power is very marketable and would be easily sold. (STR 299-300)

Staff has reviewed the most current credit rating agency reports for GRU from S&P and Moody's. (EXH 2, BSP-000343-60) In the September 2009 S&P report, the credit rating agency cited two credit concerns:

- Dependence on one generating unit to provide about 65 percent of the system's electricity.
- Additional debt burden associated with a sizable capital spending program through 2014, although rate increases and the post-2013 reduction of debt service associated with existing debt mitigate this.

(EXH 2, BSP-000345)

In the September 2009 Moody's report, the credit rating agency placed a negative outlook on GRU's credit rating. (EXH 2, BSP-000354) In its analysis, Moody's asserted that the negative outlook was premised on electric rates that are projected to increase to support additional debt and that are becoming less competitive, leaving very little headroom to raise rates further. (EXH 2, BSP-000354) The negative outlook also considered the liquidity available to cover the variable rate debt and the future dependency on operating reserves to meet significant capital improvement and other operation and maintenance-related cost increases. (EXH 2, BSP-000354) Moody's stated the following five challenges for GRU:

- Six year capital improvement program puts additional pressure on currently above average rates.
- Lack of fuel diversity could place pressure on future rates.
- Meeting regulatory requirements could result in system modifications increasing costs substantially.;
- Less competitive electric rates than other utilities in the region.
- Future dependency on rate stabilization fund.

(EXH 2, BSP-000355)

Staff concurs with GRU witness Hanrahan that one cannot speculate as to what the actions of the credit rating agencies would be from either an approval or denial of this project. (STR 296-297) Staff believes the proposed GREC Project could possibly alleviate the credit

rating agencies' expressed concerns about GRU's fuel diversity and potential carbon compliance costs. However, the proposed GREC Project may exacerbate the credit rating agencies concerns regarding non-competitive electric rates and restrained liquidity. S&P and Moody's have issued bond ratings to GRU of AA and Aa2, respectively. (OTR 95) As such, GRU is one of only 20 of approximately 2,000 utilities in the country possessing such a favorable AA rating. Based on the foregoing, staff does not believe that the decision to approve or deny the GREC Project would materially affect GRU's relatively high credit ratings. (STR 209; STR 223; STR 548)

CONCLUSION

The overall cost-effectiveness of the GREC Project is heavily dependent upon the cost of future carbon regulation, and the potential resale of half the project's capacity. The GREC Project would result in a loss of approximately $56 million based on a CPWRR analysis using current environmental regulations, fuel forecasts, and market assumptions. However, the GREC Project could result in a savings of approximately $448 million if pending environmental regulations are enacted, and GRU resells half of the capacity at full contract price. Therefore, the GREC Project could act as a hedge against potential cost increases associated with future regulation of carbon emissions and renewable energy.

The purchased power from the GREC project may initially increase the cost of electricity for GRU's customers by $3 to $13 dollars per month. This is a nominal improvement over the evidence provided during the original hearing. The evidence continues to indicate that the only scenario where the GREC Project would become the most cost-effective alternative would be if pending legislation regarding CO_2 emissions is enacted. While the Commission is concerned about what risk mitigation measures have been taken or will be taken in order to minimize any adverse rate impacts, the Gainesville City Commission is ultimately responsible to its citizens-ratepayers for the rate impact associated with the project. During the supplemental hearing, witnesses described risk mitigation techniques and indicated that the Gainesville City Commission considered other aspects of the project such as additional tax revenues, local job creation, bond ratings, and other matters outside the need determination statutes. Again, if projections presented at the hearing do not materialize, then staff would expect GRU and the City of Gainesville to respond accordingly in order to minimize any adverse rate impacts.

Florida Statutes and Commission Rules related to purchased power contracts provide safeguards such that IOU ratepayers would not pay above avoided costs for purchases of renewable capacity and energy.[9] Such is not the case with the current docket because GRU is not rate-regulated by this Commission. Staff notes, therefore, that if the petitioner were an IOU, our recommendation may have been different.

[9] See Florida Statutes 366.051 and Rules 25-17.0825, 25-17.0832, 25-17.240, and 25-17.250, F.A.C.

Issue 7: Based on the resolution of the foregoing issues, should the Commission grant the petition to determine the need for the proposed Gainesville Renewable Energy Center?

Recommendation: Yes. GRU has made a strategic decision to contract with a biomass resource for additional baseload generation, which will enhance the overall reliability of the GRU system, and significantly increase the amount of renewable energy utilized on GRU's system. The updated values provided in Issue 6 show that the GREC Project with market resale is estimated to have a cumulative net present value cost of $56 million without carbon regulation. However, the GREC Project shows a cumulative present worth savings of approximately $448 million under the Regulated CO_2 Case with resale at full contract price. The GREC Project could act as a hedge against future regulations on carbon emissions or renewables. As a municipal utility, the Gainesville City Commission would ultimately be responsible for mitigating any potential rate impacts and continued overview of the cost-effectiveness of the GREC Project. (S. Brown, Ellis)

Position of the Parties

Joint Petitioners: Yes. The Commission should grant the requested determination of need because the GREC satisfies the statutory need criteria, is the most cost-effective option for meeting Gainesville's future power requirements, promotes renewable energy, and provides substantial strategic and public interest benefits to GRU's customers and the Gainesville community

Stahmer: Intervenor respectfully seeks the Commission's denial of the application of need for the GREC Project, a 100MW net biomass fueled electrical power plant to be constructed and operated by GREC LLC on land leased from the City of Gainesville at GRU's Deerhaven Generating Station. The Project will be an economic burden for the ratepayers of GRU, and it is an extravagant waste of the city of Gainesville's resources that could deleteriously impact the fiscal integrity of both GRU and the City.

Deevey: No position statement available

Staff Analysis:

PARTIES' ARGUMENTS

The Joint Petitioners state that in making its determination, the Commission must take into account the statutory criteria under Section 403.519, F.S., which the Commission has broad discretion in weighting, and has used that discretion historically. (GRU BR 39) The Joint Petitioners cite several need determinations in which the Commission has granted determinations of need without making affirmative findings to all of the specific criteria. (GRU BR 40-41)

The Joint Petitioners contend that the Commission should give substantial weight to the fact that the Gainesville City Commission has considered and balanced many objectives in its selection of the GREC Projects. (GRU BR 42) The Joint Petitioners argue that direct electoral control over the Gainesville City Commission, which has unanimously approved the GREC Project, by citizens of Gainesville represents a majority of support at a local level. (GRU BR 43)

The Joint Petitioners suggest that the Legislature's renewable energy policies, as described in Sections 366.91 and 366.92, F.S., support the GREC Project. (GRU BR 43-44) The Joint Petitioners state that the Commission should recognize and consider potential "socio-economic benefits" that the GREC Project will provide to GRU's customers, and the Gainesville community. (GRU BR 44) The Joint Petitioners suggest these include significant risk mitigation against future carbon regulation, in addition to job creation and improved forest health. (GRU BR 44-45)

The Joint Petitioners assert that the consequences of delay of the GREC Project would include loss of potential fuel diversity, its function as a regulatory hedge against carbon regulation, and baseload capacity for reliability. (GRU BR 45-46)

Finally, the Joint Petitioners note that a majority of the public witnesses that have appeared before the Commission have been supportive of the project. (GRU BR 47-48)

Intervenor Stahmer asserts that the GREC Project represents a burden on GRU's ratepayers. (Stahmer BR 2-3) Intervenor Stahmer suggests that the GREC Project could have a negative financial impact upon GRU and GRU's ratepayers. (Stahmer BR 2)

Intervenor Stahmer argues that the GREC Project will function as a hidden tax on GRU's ratepayers. (Stahmer BR 7) Intervenor Stahmer contends that the public was uninformed about the GREC Project and unable to be involved in the negotiating process that yielded the final GREC PPA. (Stahmer BR 7-10)

Intervenor Deevey took no position on this issue.

INITIAL HEARING ANALYSIS

As discussed in Issue 2, GRU does not have a capacity need until 2023. However, the addition of the capacity from the proposed GREC Project would enhance reliability and eliminate GRU's need for additional capacity until 2032.

As discussed in Issue 4, GRU has chosen to place more emphasis on renewable generation and therefore sought to replace its expiring purchased power contracts with generation from a renewable energy source capable of baseload operation. GRU's existing system consists primarily of coal-fired baseload generation. The addition of capacity from the proposed GREC Project will provide renewable baseload capacity while replacing purchased power, thereby reducing coal and natural gas usage on GRU's system. The GREC Project was selected by GRU as the least-cost renewable proposal during an RFP process for biomass facilities, and is a continuation of GRU and the Gainesville City Commission's efforts to encourage renewable energy.

As discussed in Issue 6, the addition of the GREC Project was originally estimated to result in a cumulative net present value cost of approximately $100 million under current economic conditions. However, if GRU re-sells half of the contracted capacity and if pending carbon legislation is enacted, the GREC Project was originally estimated to provide cumulative net present value savings of approximately $400 million over the life of the facility. Therefore,

the GREC Project could act as a hedge against future costs associated with the regulation of carbon emissions. However, these values were all later revised, as discussed below.

SUPPLEMENTAL HEARING ANALYSIS

The Commission's need determination is an integral part of the overall site certification process. The Commission is the sole forum for a determination of need and, if a need determination is granted, the process continues with reviews by the Department of Environmental Protection (DEP) and other state and local agencies. Final certification requires the approval of the Governor and Cabinet presiding as the Siting Board based on their review of the total record.

In making its determination of need, Section 403.519, F.S., requires the Commission to take into account the following criteria:

- The need for electric system reliability and integrity.
- The need for adequate electricity at a reasonable cost.
- The need for fuel diversity and supply reliability.
- Whether the proposed plant is the most cost-effective alternative available.
- Whether renewable energy sources and technologies, as well as conservation measures, are utilized to the extent reasonably available.
- Other matters within its jurisdiction which it deems relevant.

While the applicable need determination statute makes it clear that each of these factors must be taken into consideration, the statute does not prescribe what importance or weight should be given to each by the Commission. Therefore, the Commission has broad authority to determine how each of these criteria may be weighted, and has the discretion to determine the need for an electrical power plant based upon one or more of the qualifications above, so long as each has been considered as a component of the final decision. See Nassau Power Corp. v. Beard, 601 So. 2d 1175, 1176-77 (Fla.1992) (noting the Commission must make findings for each of the statutory criteria); Order No. 10108, issued June 26, 1981, in Docket No. 810045-EU, In re: JEA/FPL's Application of need for St. John's River Power Park Units 1 and 2 and related facilities, (considering, in addition to the statutory need criteria, the socio-economic need of reducing the consumption of imported oil in the State of Florida and the adoption of the Florida Energy Efficiency and Conservation Act (FEECA)); Order No. 10320, issued October 2, 1981, in Docket No. 810180-EU, In re: Petition for Certification of Need for Orlando Utilities Commission, Curtis H. Stanton Energy Center Unit 1, (considering, in addition to "need for power," the socio-economic need of reducing the consumption of imported oil and conservation goals established pursuant to FEECA); Order No. PSC-08-0518-FOF-EI, issued August 12, 2008, Docket No. 080148-EI, In re: Petition for determination of need for Levy Units 1 and 2 nuclear power plants, by Progress Energy Florida, Inc. (noting that the Commission also considered Section 366.93, F.S., which allows pre-construction cost recovery for nuclear power plants).

The promotion of the development of renewable energy in the State of Florida is a matter falling within the Commission's jurisdiction and is relevant for consideration in this proceeding. The Legislature has provided guidance to the Commission specifically related to promoting renewable energy in Section 366.92(1), F.S., which states:

> It is the intent of the Legislature to promote the development of renewable energy; protect the economic viability of Florida's existing renewable energy facilities; diversify the types of fuel used to generate electricity in Florida; lessen Florida's dependence on natural gas and fuel oil for the production of electricity; minimize the volatility of fuel costs; encourage investment within the state; improve environmental conditions; and, at the same time, minimize the costs of power supply to electric utilities and their customers.

The Legislature also provided guidance to municipal utilities and rural electric cooperatives in Section 366.92(5), F.S. which states:

> Each municipal electric utility and rural electric cooperative shall develop standards for the promotion, encouragement, and expansion of the use of renewable energy resources and energy conservation and efficiency measures....

Over the course of both hearings, it became clear that the Gainesville City Commission's decision to pursue the GREC Project was the result of the community's desire to encourage the expansion of renewable energy resources in their community. The GREC project is also designed to provide a hedge against future regulation of carbon emissions and achieve the Gainesville City Commission's self-imposed goals for greenhouse gas reduction.

The Commission will not review the final costs or establish rates resulting from the proposed GREC project because GRU, a municipal utility, is not rate-regulated by this Commission.[10] As such, it is the Gainesville City Commission that is ultimately responsible to its citizens/ratepayers for all rate impacts associated with the project. The record indicates that both the Gainesville City Commission and GRU made many efforts to inform GRU's customers that their rates could increase when the plant is operational. Staff would expect that the Gainesville City Commission will review the project's total costs as well as other impacts associated with the project such as increased jobs, property taxes, traffic patterns, and future off-system power sales before establishing retail electric rates for its citizens.

GRU's current load forecast indicates that the utility does not have a strict reliability need for additional capacity until the year 2023, but the addition of the GREC capacity will improve GRU's overall reliability and contribute significantly to fuel diversity on GRU's system. In the past, the Commission has approved need determinations for cogeneration and renewable facilities for similar reasons. See Order No. 11611, February 14, 1983, in Docket No. 820460-EU, In re: Petition of Florida Crushed Stone Company for Determination of Need for a Coal-Fired Cogeneration Electrical Power Plant (approving the need because, in addition to the statutory need criteria, the proposed cogeneration facility appeared to be a cost effective

[10] Section 366.11, F.S.

conservation measure under FEECA); Order No. 17752, issued June 26, 1987, in Docket No. 870193-EG, In re: Petition of Pasco County for determination of need for a solid waste-fired cogeneration power plant (approving Pasco County's 29 MW cogeneration facility because it would make some small contribution to electric system reliability and integrity in Peninsula Florida).

With the addition of the supplemental filings, the GREC Project remains a baseload renewable energy resource that can improve GRU's system reliability, fuel diversity, and provide an economic hedge against future carbon regulation. The updated values provided in Issue 6 show that the GREC Project, with market resale, is estimated to have a cumulative net present value cost of $56 million without carbon regulation. However, the GREC Project shows a cumulative present worth savings of approximately $448 million under the Regulated CO_2 Case with resale at full contract price. Witness Regan states that GRU will have an estimated $7 billion in expenditures during the contract period of the GREC Project. Further, witness Regan states in response to a staff interrogatory that financial hedges are a form of insurance, which will always have a cost associated with them. (EXH 64, BSP-000571) Witness Regan also notes that the Gainesville City Commission was aware that the GREC Project would have an initial rate impact, and face risks related to resale and delay.

Since GRU is a municipal utility, this Commission does not have rate-setting authority, and is therefore limited in what oversight it can perform. If GREC LLC contracted with an IOU, recovery of payments made under the contract would be subject to the Commission's approval, which could limit the costs to prevent ratepayers from paying above avoided cost for the renewable energy and capacity of any project. Such is not the case with the current docket because GRU is not rate-regulated by this Commission. We would note, therefore, that if the petitioner were an IOU, our recommendation may have been different. Instead, the municipal government, in this case the Gainesville City Commission, is ultimately responsible for mitigating any potential rate impacts of the GREC Project.

The Commission's decision on a need determination petition must be made several years in advance and based on the facts as they exist at the time of the filing. If conditions change from what was presented at the need determination proceeding, then a prudent utility would be expected to respond accordingly. For an IOU, the Commission must review the final costs for cost recovery purposes when the generating unit comes on-line. If, after review, it were found that an IOU should have stopped construction or pursued a more cost-effective alternative, the Commission can adjust the IOU's rates accordingly. However, the Commission does not have final rate making authority over municipal utilities and will not review the final costs or establish rates resulting from the proposed GREC project. If projections presented at the hearing do not materialize, then staff would expect GRU and the City of Gainesville to respond accordingly.

CONCLUSION

After considering all the evidence contained in the record, staff continues to recommend approval of the need for the GREC biomass facility because the project should:

- Enhance the overall reliability of the GRU system and can replace older, less efficient generation.
- Satisfy a need for GRU to improve its fuel diversity and supply reliability.
- Promote the development of renewable generation in Florida.
- Become the most cost-effective alternative if pending legislation regarding CO_2 emissions is enacted.

GRU has made a strategic decision to contract with a biomass renewable resource for additional baseload generation. The selection of a renewable resource corresponds to the intent of the Legislature, as set forth in Section 366.92(1), F.S., to promote renewable development in the State of Florida. The GREC Project will enhance the overall reliability of the GRU system by providing an additional source of baseload generation. The GREC Project satisfies a need for GRU to improve its fuel diversity and supply reliability. The fuel requirements of the GREC Project are not projected to negatively impact any existing biomass facilities. The GREC Project adds an additional fuel type to GRU's system, and decreases its dependence upon coal and natural gas. The GREC Project also represents a significant investment in the development of renewable energy in Florida. Meaningful economic benefits to GRU and its ratepayers could also accrue if pending legislation regarding carbon emissions is enacted. GRU has enacted several contract provisions to minimize the cost of this renewable resource to the utility and its ratepayers. GRU, as a municipal utility, is not rate-regulated by the Commission. Therefore, GRU is ultimately responsible for the rate impact of the GREC Project and any potential efforts to mitigate that impact. For all of the reasons identified above, staff recommends approval of the need for the GREC Project.

Issue 8: Should this docket be closed?

Recommendation: Yes. Upon issuance of a final order addressing GRU and GREC LLC's joint petition to determine the need for the GREC Project, the docket should be closed when the time for filing an appeal has run. (M. Brown, Sayler)

Staff Analysis: Upon issuance of a final order addressing GRU and GREC LLC's joint petition to determine the need for the GREC Project, the docket should be closed when the time for filing an appeal has run.