

1 BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION
2 SUPPLEMENTAL TESTIMONY OF PEGEEN HANRAHAN, P.E.
3 ON BEHALF OF
4 GAINESVILLE REGIONAL UTILITIES AND
5 GAINESVILLE RENEWABLE ENERGY CENTER, LLC
6 DOCKET NO. 090451-EM
7 MARCH 15, 2010
8

9 **Q. Please state your name and business address.**

10 A. My name is Pegeen Hanrahan, and I am the Mayor of the City of Gainesville.

11 My business address is 200 East University Ave., Gainesville, FL 32601.
12

13 **Q. Please discuss your role within the City of Gainesville.**

14 A. I am in my twelfth year of elective service with the City of Gainesville, and was
15 re-elected Mayor in March 2007. As Mayor, I preside at Gainesville City
16 Commission meetings, serve as the Chair of the City Commission's Audit,
17 Finance and Legislative Committee and serve as a representative of the City, not
18 only at the local level, but also at the state, national and international level.
19

20 **Q. What is your educational background?**

21 A. I have Bachelor's and Master's degrees in Environmental Engineering from the
22 University of Florida. I also have a B.A. in Sociology from the University of
23 Florida. I am a registered Professional Engineer in Florida.
24

1 **Q. Did you previously file direct testimony in this docket?**

2 **A. Yes.**

3

4 **Purpose and Summary of Testimony**

5 **Q. What is the purpose of your supplemental testimony?**

6 **A. I am testifying on behalf of Gainesville Regional Utilities ("GRU"), which is the**
7 utility arm of the City of Gainesville ("City"), and Gainesville Renewable
8 Energy Center, LLC ("GREC LLC") in support of our joint petition for
9 determination of need for the Gainesville Renewable Energy Center ("GREC" or
10 "GREC Project"), a 100 MW biomass-fueled electrical power plant that will be
11 constructed on the site of GRU's Deerhaven Generating Station.

12 The purpose of my supplemental testimony is to address several of the
13 Public Service Commission's ("PSC") questions raised during the February 9 ,
14 2010 Agenda Conference regarding:

15 (a) the PSC's role in this need determination proceeding for a renewable,
16 biomass-fueled power plant that will serve Gainesville's city-owned
17 electric system and our customers and citizens;

18 (b) the City of Gainesville's need for the GREC biomass facility and
19 other policy objectives;

20 (c) the risks associated with GREC and risk mitigation actions taken by
21 GRU and the City of Gainesville in connection with GREC;

22 (d) the likelihood of carbon dioxide and other greenhouse gas ("GHG")
23 emission regulations and the potential impacts of these regulations on the
24 City and the Gainesville community; and

1 (e) the consistency of the City of Gainesville's policy with respect to
2 federal and state CO₂ emissions reduction policy proposals.
3

4 **Q. Are you sponsoring any exhibits to your testimony?**

5 A. Yes. I am sponsoring the following exhibits:

6 Exhibit No. ____ [PH-1] Resumé of Pegeen Hanrahan, P.E.

7 Exhibit No. ____ [PH-2] Gainesville, Florida One Community's Strategy to
8 Reduce Global Warming

9 Exhibit No. ____ [PH-3] U.S. Mayors Climate Protection Agreement

10 Exhibit No. ____ [PH-4] Alachua County Environmental Protection
11 Advisory Committee - Review of the Gainesville
12 Regional Utilities Proposal for a New Coal-Fired
13 Power Plant

14 Exhibit No. ____ [PH-5] Economic Impact Analysis of Gainesville
15 Renewable Energy Center (GREC) Proposed
16 Biomass Power Project in Alachua County and
17 Surrounding Counties
18

19 **Q. Please summarize the main conclusions of your testimony.**

20 A. In response to questions about the PSC's role in this need determination
21 proceeding, I believe that the PSC should consider and give substantial weight
22 to the City's balance of many objectives in choosing to proceed with GREC.
23 The City's objectives are broader than just electric generation.
24

1 The first objective is improved reliability. The average age of our current
2 generating fleet is 28 years. Our largest unit, Deerhaven 2, which provides most
3 of the community's around the clock base load power, is nearly 30 years old.
4 GREC will provide additional base load generation for improved reliability.

5
6 Second, GREC will also provide much needed fuel diversity. Over 60 percent
7 of our energy is produced using coal. It has been pointed out to us numerous
8 times by bond rating agencies Standard and Poor's and Moody's Investors
9 Service that we are too heavily reliant on coal. This can be found in nearly
10 every bond financing report since I have been Mayor. GREC will provide much
11 needed fuel diversity reducing our dependence on fossil fuels, especially coal.

12
13 Third, GREC will allow us to provide long-term cost stability for our customers.
14 Our customers need stable electric prices in order to budget and plan. GREC
15 will remove volatility in the cost of fossil fuels, and potential significant
16 increases in costs due to regulatory compliance.

17
18 As a municipal utility, GRU has public policy objectives that are different than
19 those of an investor-owned utility. These include:

- 20 • reducing our reliance on fossil fuels;
- 21 • reducing our risks from fossil fuel price volatility and potential
22 supply disruptions;
- 23 • reducing our risks from future carbon and green house gas
24 regulatory costs;

- 1 • meeting our community's pledge to reduce green house gas
- 2 emissions pursuant to the U.S. Mayors' Climate Protection
- 3 Agreement, which I executed on behalf of the City pursuant to
- 4 the unanimous vote of the Gainesville City Commission;
- 5 • reducing risks to customers from future renewable energy
- 6 mandates; and
- 7 • promoting economic development in the Gainesville community
- 8 and north central Florida by adding tax revenues and well-paying,
- 9 permanent jobs as a result of GREC.

10 In short, just as the PSC carries out its regulatory duties in the public interest,
11 GRU and the City carry out our responsibilities to serve the overall public
12 interest. I respectfully ask that the PSC consider all of our generation needs as
13 well as our public policy objectives in its decision to grant the requested
14 determination of need for GREC.

15
16 **Q. What are the economic impacts of GREC on the north central Florida**
17 **region?**

18 A. A recent study performed by Dr. Julie Harrington, Exhibit No. ____ [PH-5]
19 indicated that the economic benefits would be quite substantial. Her study
20 included the effects on the twenty-four (24) Florida counties within a 75 mile
21 radius of the GREC, using the Florida Impact Analysis for Planning model
22 (IMPLAN) used extensively by state and local government agencies to evaluate
23 legislative and policy initiatives across both public and private sectors. The

table below summarizes the results of this study, including effects both during construction and ongoing operation and maintenance of the plant.

Parameter	Direct Jobs	Indirect & Induced Jobs	Total Jobs	Average Annual Salary (\$2010)
Full Time Equivalent Jobs During Construction Period	547	567	1,114	\$48,628
Permanent Jobs During Ongoing Operations	204	529	733	\$42,444
Total Annual Income During Ongoing Operations (\$2010)	\$31,114,216			
Total Present Value (NPV \$2010 including construction period)	\$608,226,320			

One of the findings of the study was that the investment in GREC had a benefit to cost ratio of 1.8 to 1 compared to investing in a generic trade business in the GREC region. The average salary for all jobs created by GREC (including direct, indirect, and induced jobs) found in the study is expected to be well above average for the GREC region.

The PSC's Role in Determining Need for GREC

Q. During the February 9, 2010 Agenda Conference, Commissioners Edgar and Skop asked questions regarding the PSC's role in this particular need determination for the biomass-fueled GREC Project proposed in this case. [TR P2, 9, 12, 36, 41-43, 57, 70] What is your understanding of the PSC's role in need determination cases?

1 A. Under the PSC's need determination statute, the PSC is the "exclusive forum"
2 for determining need for proposed electrical power plants that are of a certain
3 size and technology. As a 100 MW steam generating unit, GREC is subject to
4 the mandatory jurisdiction of the Power Plant Siting Act. In these cases, the
5 PSC is charged to consider a list of statutory criteria, plus other matters within
6 its jurisdiction. Ultimately, after taking into account the various factors and
7 criteria, the PSC makes its determination as to whether a proposed plant is
8 needed based on whether it fulfills at least one the criteria considered.

9
10 **Q. How do you believe the PSC should evaluate Gainesville's petition for**
11 **determination of need for GREC?**

12 A. I believe that the PSC should give careful consideration to the fact that this is a
13 need determination for a renewable energy power plant proposed by a municipal
14 utility serving its customers, who are also its citizens. I believe that this
15 evaluative framework is appropriate for Gainesville's proposal because we –
16 GRU and the Gainesville City Commission – are directly subject to local
17 electoral control and because the Gainesville City Commission is interested in
18 maximizing the long-term benefits to our customers, citizens, and community
19 rather than maximizing shareholder returns. I and my fellow Commissioners
20 serve as GRU's Board of Directors and as such have fiduciary responsibility for
21 the utility and we are keenly aware of our fundamental commitment to provide
22 reliable electric service at a reasonable cost. GRU is a AA-rated utility by
23 Standard and Poor's and Moody's Investor Services – one of only 20 of the
24 2,000 municipal utilities in the US that carries this high bond rating. I believe

1 that the PSC should, as a matter of policy, give great consideration to these
2 factors, and to the extensive public deliberations that occurred over a 7-year
3 period that resulted in the decision to move forward with GREC.

4
5 **Q. You stated that the City Commission held extensive public deliberations in**
6 **arriving at your decision to select GREC. Please summarize those activities**
7 **briefly.**

8 A. Our 7-year-long process that led to the selection of GREC has been summarized
9 in previous testimony and in the Need for Power Application (Section 8.0 of
10 Exhibit No. 27). There have been 37 publicly televised meetings, dozens of
11 workshops and other public meetings, mail-outs and informational notices
12 published in The Gainesville Sun, and other public outreach activities. We
13 gathered information from many resources and considered input from many
14 individuals and groups, including the Alachua County Environmental Protection
15 Advisory Committee (EPAC), a citizen committee that recommended expanding
16 our energy conservation programs, expansion of our solar programs, and a 100
17 MW biomass plant. This and other extensive citizen participation have led to
18 GRU implementing extensive conservation programs and solar feed-in tariff
19 programs, and developing GREC. The EPAC report is provided as Exhibit No.
20 ___ [PH-4].

21
22 **Q. Did the City Commission consider that adding GREC in 2013 would result**
23 **in reserve margins greater than GRU's minimum reserve margin for**

1 **planning purposes, and that adding GREC in 2013 could cause customers'**
2 **bills to increase in the near-term?**

3 A. Yes. These factors were considered explicitly and publicly. I would emphasize
4 that GREC is expected to decrease GRU's customers' costs over the long-term.

5

6 **Q. Was the Gainesville community informed that GREC would go into service**
7 **prior to GRU's anticipated need for capacity to maintain reserve margin**
8 **requirements?**

9 A. Yes. Throughout public planning process I've discussed, GRU's projected
10 resource needs from a reserve margin perspective were communicated to our
11 community at a number of meetings.

12

13 **Q. Members of the PSC discussed the question of the City Commission's**
14 **accountability to Gainesville's citizens. Do you believe that local electoral**
15 **control provides adequate protection for your citizens and electric**
16 **customers?**

17 A. Yes. This is the nature of public power: we are subject to local control, and
18 electoral response can be fairly immediate. With GREC, if – contrary to our
19 expectation – our customers' bills were to increase more than is acceptable to
20 our citizens in light of the benefits provided by the Project, we will hear about it
21 in the next election cycle. Gainesville holds elections every single year. So far,
22 eleven Commissioners have voted unanimously in support of GREC over the
23 years, including myself and sitting Commissioners Craig Lowe, Jack Donovan,
24 Thomas Hawkins, Lauren Poe, Jeanna Mastrodicasa, and Sherwin Henry, and

1 previous Commissioners Rick Bryant, Ed Braddy, Warren Nielsen, and Chuck
2 Chestnut.

3
4 **Q. Please describe Gainesville's commitments under the U.S. Mayors Climate**
5 **Protection Agreement.**

6 A. As discussed in my prefiled direct testimony (which was subsequently adopted
7 by Vice Mayor Sherwin Henry), in 2005 City of Gainesville leaders, along with
8 cities across the US, pledged to reduce green house gas emissions, particularly
9 carbon dioxide. I signed the U.S. Mayors Climate Protection Agreement on
10 behalf of and with the unanimous approval of the Gainesville City Commission
11 (Exhibit No. 30, also provided as Exhibit No. __ [PH-3]). In quantitative terms,
12 the Mayors Climate Protection Agreement calls for reducing carbon emissions
13 to 7 percent below 1990 levels by 2012. The 7 percent reduction is consistent
14 with the 2012 reduction target set forth in the Kyoto Protocol. As our plans
15 have evolved, we will meet the 2012 goals in late 2013 when GREC comes on
16 line.

17
18 For the City of Gainesville, the 7 percent reduction target using 1990 as the
19 baseline results in a target carbon emissions of 1,791,701 (as measured in
20 equivalent metric tons of CO₂ per year). For reference, total 2008 carbon
21 emissions were 1,992,979 (as measured in equivalent metric tons of CO₂ per
22 year). Our overall strategy for reducing carbon emissions is discussed in Exhibit
23 No. __ [PH-2]. GREC is a critical component of our strategy to reduce carbon
24 emissions.

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9 **Q. How will the City of Gainesville meet its CO₂ emissions reduction goals if**
10 **the GREC Petition for Determination of Need is not approved?**

11 **A. Without GREC, it would be very difficult to meet our CO₂ emissions reduction**
12 **goals, and any alternative methods of doing so would be much more expensive.**

13

14

Risks and Risk Mitigation

15 **Q. During the February 9, 2010 Agenda Conference, several members of the**
16 **PSC expressed interest in understanding more about GRU's risk mitigation**
17 **activities in connection with GREC. [TR P6, L4, P29, L7, P37, L4, P59, L9]**
18 **In your previous discussion, you mentioned several of the risks facing**
19 **Gainesville and your electric customers that you believe GREC will**
20 **mitigate. Please summarize those risks, and any other risks that GRU and**
21 **its customers either face or are protected against by GREC.**

22 **A. As I stated above, the risks that GREC mitigates include our risk exposure to**
23 **likely GHG regulation and renewable energy mandates, and the risks of fossil**
24 **fuel price volatility and supply disruptions. Additionally, the supplemental**

1 testimony of Ed Regan discusses several risks that we have been able to protect
2 against, or mitigate, through favorable terms in our power purchase contract
3 with GREC LLC.

4
5 Of course there are risks inherent in any major decision, because we do not have
6 perfect information about the future. Such risks are present in any decision to
7 construct any power plant, or any other significant capital project. Fuel costs
8 can change and markets can change, and any decision can – eventually, in
9 hindsight – turn out well or not so well. After many public meetings and with
10 volumes of public input, we evaluated all the risks that we could identify and
11 consider them carefully and thoroughly in order to develop mitigation strategies,
12 As I see it, moving forward with GREC is a quantifiable minimum risk, while
13 doing nothing poses much greater risks to GRU and the Gainesville community.

14
15 **Q. Do you believe that the risks mitigated outweigh the risks taken?**

16 A. Yes, absolutely and unequivocally. As Mr. Regan testifies, the expected risk-
17 mitigation benefits of GREC far exceed the worst-case possible costs.

18
19 **Q. What about the risks that GRU and GRU's customers face if GREC is not**
20 **constructed as proposed?**

21 A. The downside risk of not proceeding with GREC is far greater than the risk we
22 face if we do proceed with GREC. If GREC is not constructed as proposed by
23 GRU and GREC LLC, we will still be committed to mitigating the risks of fuel
24 price volatility and supply disruptions, carbon legislation and renewable energy

1 mandates, generation reliability, long term costs to customers and meeting our
2 pledge under the U.S. Mayors Climate Protection Agreement. Without GREC,
3 we will incur greater costs, be exposed to greater risks and lose substantial
4 benefits to our local economy.

5
6 **Potential Climate Change Regulation and Renewable Energy Mandates**

7 **Q. Why do you believe that GRU and the City of Gainesville need to put into**
8 **place plans that will mitigate the financial effects of carbon constraining**
9 **regulations or mandates to produce a portion of your community's**
10 **electrical needs from renewable sources of energy?**

11 **A.** Not only are regulatory mandates very likely, but the Gainesville City
12 Commission is responding to the interests and values expressed by our
13 community. The sustained level of federal and state legislative initiatives, the
14 fact that 35 states have already adopted renewable or clean energy standards or
15 goals, and the continued pressure from world opinion indicate that the
16 probability of legislation mandating carbon constraints and renewable portfolio
17 standards is not only high, but that the train for greenhouse gas regulation has
18 already left the station.

19
20 Witness Regan's testimony will review in detail the current status of federal and
21 state legislation related to carbon regulation and renewable portfolio standards in
22 detail. Later in my testimony I will explain how GREC supports existing
23 Florida policies, established by the Florida legislature, that it is in the public
24 interest to promote the use of renewable energy.

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I say the train has left the station because EPA has received authorization and is proceeding to regulate greenhouse gases as pollutants. The U.S. Supreme Court has ruled that CO₂ is a pollutant under the Clean Air Act, and therefore the U.S. EPA has the authority and the responsibility to regulate it. U. S. EPA has announced its intent to regulate carbon. Here are a few details from the EPA's website:

- “On December 7, 2009, the Administrator signed two distinct findings regarding greenhouse gases under section 202(a) of the Clean Air Act:
- **Endangerment Finding:** The Administrator finds that the current and projected concentrations of the six key well-mixed greenhouse gases--carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF₆)--in the atmosphere threaten the public health and welfare of current and future generations.
 - **Cause or Contribute Finding:** The Administrator finds that the combined emissions of these well-mixed greenhouse gases from new motor vehicles and new motor vehicle engines contribute to the greenhouse gas pollution which threatens public health and welfare. On April 2, 2007, in *Massachusetts v. EPA*, 549 U.S. 497 (2007), the Supreme Court found that greenhouse gases are air pollutants covered by the Clean Air Act. The Court held that the Administrator must determine whether or not emissions of

1 greenhouse gases from new motor vehicles cause or contribute to
2 air pollution which may reasonably be anticipated to endanger
3 public health or welfare, or whether the science is too uncertain
4 to make a reasoned decision. In making these decisions, the
5 Administrator is required to follow the language of section 202(a)
6 of the Clean Air Act. The Supreme Court decision resulted from
7 a petition for rulemaking under section 202(a) filed by more than
8 a dozen environmental, renewable energy, and other
9 organizations.”

10 Regardless of legislative mandates and environmental regulations, the
11 Gainesville City Commission, after years of public discussion, is pursuing the
12 expressed interests of our community to reduce our contribution to climate
13 change, to increase our energy independence and freedom from supply
14 disruptions, and to create local wealth in the form of jobs and investment in our
15 community.

16

17 **Q. Is the City of Gainesville’s policy with regards to CO₂ emissions reductions**
18 **consistent with federal policy?**

19 A. Yes. As I discussed in response to the last question, there is continued reason to
20 believe that CO₂ will be regulated, whether through congressional action or EPA
21 rulemaking. Our community’s efforts to reduce CO₂ emissions are therefore
22 consistent with federal policy.

23

1 **Q. Is the City of Gainesville’s policy with regards to renewable energy and**
2 **CO₂ emissions reductions consistent with the policy objectives set forth by**
3 **the Florida Legislature?**

4 **A. Yes. Our policy is consistent with the objectives set forth by the Legislature in**
5 Florida Statutes. Those policy goals include promoting the development of
6 renewable energy in Florida, diversifying the fuel mix of Florida's electricity
7 supply, reducing the State's dependence on natural gas and fuel oil, minimizing
8 the volatility of fuel costs, encouraging investment in Florida, and improving
9 environmental conditions by reducing emissions produced from conventional
10 electricity generation. GREC will promote these public-interest purposes for
11 Gainesville and our citizens as well as for the State as a whole.

12
13 **Q. Why should the Florida Public Service Commission approve the GREC**
14 **Petition for Determination of Need when GRU’s own projections indicate**
15 **capacity is not needed until 2023?**

16 **A. GRU’s application was based on a number of factors about which I’ve already**
17 spoken, and not based strictly on a need for system reserve margins. These
18 factors include improved reliability; fuel diversity; long-term price stability for
19 customers; less reliance on fossil fuels; reducing risks from fossil fuel price
20 volatility and potential supply disruptions; reducing risks from future carbon and
21 greenhouse gas regulatory costs; meeting our community's commitment to
22 reduce greenhouse gas emissions pursuant to the U.S. Mayors Climate
23 Protection Agreement; promoting economic development through increased tax
24 revenues and adding more than 700 jobs; and mitigating risks from future

1 renewable energy mandates. GREC is the most cost-effective renewable
2 resource available to GRU, and as a base load resource, helps us improve
3 reliability.

4
5 **Q. Will GREC provide benefits to the State of Florida as a whole?**

6 A. Yes. The benefits that the City of Gainesville will realize through GREC carry
7 over to the entire State. In particular, any utility that purchases a share of GREC
8 during its initial 10 years of operation will share the same benefits as GRU
9 related to fuel diversity, CO₂ emissions reduction, energy independence, and
10 increased use of renewables. Over its operating life, GREC will contribute to
11 statewide energy independence, reduced CO₂ emissions, improved
12 environmental conditions and fuel diversity, while providing economic stimulus
13 in the form of jobs in the region.

14
15 **Q. Please summarize your testimony, including what action you are asking the**
16 **PSC to take in this case.**

17 A. GRU and the City of Gainesville thoroughly considered and carefully evaluated
18 many alternatives, with extensive public deliberation and voluminous public
19 input before selecting the Gainesville Renewable Energy Center Project and
20 petitioning for the PSC's determination of need. We exist to serve the public
21 interest of the Gainesville community, and Gainesville needs GREC not only to
22 meet our long-term needs for a reliable, environmentally sound power supply,
23 but also meet our goals of energy independence and sustainability; to mitigate
24 the risks of climate change and renewable energy standards regulation; to

1 mitigate the risks of fuel price volatility and supply disruptions; and to promote
2 economic growth in the Gainesville community and north central Florida
3 through the substantial investment and the more than 700 jobs that will be
4 created by GREC.

5
6 The PSC should recognize, as we do, that every risk that is mitigated by GREC
7 is a risk that Gainesville and our citizens are exposed to if GREC is not
8 constructed and operated as proposed in our petition, and that every benefit that
9 is provided by GREC is lost, or at best diminished, if GREC is not built and
10 operated. If GREC is not constructed, we will still be committed to meeting our
11 pledge under the U.S. Mayors Climate Protection Agreement, and we will still
12 be committed to doing what we can to mitigate the risks I have discussed today.
13 Without GREC, we will incur greater costs, be exposed to greater risks, and lose
14 substantial benefits to our local economy.

15
16 Accordingly, I respectfully ask that the PSC grant the requested determination of
17 need for GREC.

18
19 **Q. Does this conclude your testimony?**

20 **A.** Yes.

21

22