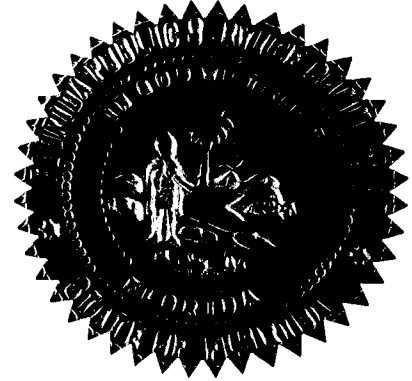


BEFORE THE
FLORIDA PUBLIC SERVICE COMMISSION

DOCKET NO. 060635-EU

In the Matter of

PETITION FOR DETERMINATION OF NEED FOR
ELECTRICAL POWER PLANT IN TAYLOR COUNTY
BY FLORIDA MUNICIPAL POWER AGENCY, JEA,
REEDY CREEK IMPROVEMENT DISTRICT, AND
CITY OF TALLAHASSEE.



VOLUME 7

Pages 643 through 790

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THE .PDF VERSION INCLUDES PREFILED TESTIMONY.

PROCEEDINGS: HEARING

BEFORE: CHAIRMAN LISA POLAK EDGAR
COMMISSIONER MATTHEW M. CARTER, II
COMMISSIONER KATRINA J. TEW

DATE: Friday, January 12, 2007

TIME: Commenced at 10:00 a.m.

PLACE: Betty Easley Conference Center
Room 148
4075 Esplanade Way
Tallahassee, Florida

REPORTED BY: LINDA BOLES, CRR, RPR
Official FPSC Reporters
(850) 413-6732

APPEARANCES: (As heretofore noted.)

FLORIDA PUBLIC SERVICE COMMISSION

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P R O C E E D I N G S

(Transcript follows in sequence from Volume 6.)

CHAIRMAN EDGAR: I call this hearing to order today.
And we are ready, if you are ready.

MS. RAEPPLE: We are ready.

CHAIRMAN EDGAR: So I think that where we were broke last night, we were going to move on to the next witness, which, according to my list, is Witness Gilbert.

MS. RAEPPLE: That's correct.

CHAIRMAN EDGAR: Okay.

DON GILBERT

was called as a witness on behalf of the Florida Municipal Power Agency, JEA, Reedy Creek Improvement District and the City of Tallahassee and, having been duly sworn, testified as follows:

DIRECT EXAMINATION

BY MS. RAEPPLE:

Q Please state your name and business address.

A My name is Don Gilbert. My business address is
21 West Church Street, Jacksonville, Florida.

Q Have you been sworn, Mr. Gilbert?

A Yes, I have.

Q Did you submit prefiled testimony on September 19,
2006, consisting of 15 pages in this proceeding?

A Yes, I have.

1 Q Do you have any changes or additions to that
2 testimony?

3 A No, I do not.

4 Q If I were to ask you the same questions set forth in
5 your testimony today, would your answers be the same?

6 A Yes, they would.

7 Q Are you sponsoring an exhibit to your testimony?

8 A Yes, I am. I'm sponsoring Exhibit DG-1, a copy of my
9 resume.

10 Q And that has been marked as Exhibit 16?

11 A Yes.

12 Q Do you have any changes to that exhibit?

13 A No, I do not.

14 Q Okay. Are you sponsoring the sections of the need
15 for power application that are designated in Exhibit 17 as
16 updated by the errata in Exhibit 3?

17 A Yes, I am.

18 Q Do you have any changes to those sections of the need
19 for power application?

20 A No, I do not.

21 MS. RAEPPLER: Madam Chairman, I request that
22 Mr. Gilbert's direct testimony be admitted into the record as
23 though read.

24 CHAIRMAN EDGAR: The prefiled direct testimony will
25 be entered into the record as though read.

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BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

DIRECT TESTIMONY OF DON GILBERT

ON BEHALF OF

JEA

DOCKET NO. _____

SEPTEMBER 19, 2006

Q. Please state your name and business address.

A. My name is Don Gilbert. My business address is 21 West Church Street,
Jacksonville, Florida 32202.

Q. By whom are you employed and in what capacity?

A. I am employed by JEA. My title is Manager, Electric System Planning.

Q. Please describe your responsibilities in that position.

A. I am responsible for planning activities including generation, transmission, and
distribution related to JEA's electric system. It is my responsibility to ensure
that JEA will be able to continue to reliably serve retail electric load at a
reasonable cost.

Q. Please state your educational background and professional experience.

A. I received my Bachelor of Electrical Engineering degree from the Georgia
Institute of Technology in 1982. I am a licensed professional engineer in the
State of Florida, with more than 28 years of experience in the electric utility

1 industry, including 4 years in Georgia Power Company's corporate planning,
2 3 years in JEA's corporate planning, 20 years in JEA's system operations, and
3 more than 1 year as current manager of JEA's Electric System Planning.
4

5 **Q. What is the purpose of your testimony in this proceeding?**

6 A. The purpose of my testimony is to provide a description of JEA's existing
7 system, summarize JEA's forecast of electrical demand and consumption, and
8 describe JEA's need for capacity. I will also discuss several strategic
9 considerations that led JEA to participate in Taylor Energy Center (TEC), and I
10 will describe how JEA will finance its share of the unit.
11

12 **Q. Are you sponsoring any exhibits as part of your pre-filed testimony?**

13 A. Yes. I am sponsoring Exhibit ___ [DG-1], which is a copy of my résumé.
14

15 **Q. Are you sponsoring any sections of the Taylor Energy Center Need for
16 Power Application, Exhibit __ [TEC-1]?**

17 A. Yes. I am sponsoring Sections C.1 through C.4, C.7.1, C.8, and C.10.
18

19 **Q. Please describe JEA's existing system.**

20 A. JEA is the eighth largest municipally owned electric utility in the United States
21 in terms of number of customers. JEA's electric service area covers all of Duval
22 County and portions of Clay and St. Johns Counties. JEA's service area covers
23 approximately 900 square miles and serves more than 380,000 customers. JEA
24 consists of three financially separate entities: the Electric System, the bulk

1 power system St. Johns River Power Park Units 1 and 2 (the Power Park or
2 SJRPP), and the bulk power system Robert W. Scherer Electric Generating Plant
3 (Scherer Unit 4). The Electric System includes the Brandy Branch, Northside,
4 and Kennedy generating stations. JEA also has a contract with Southern
5 Company for the purchase of 207 megawatts (MW) of coal fired capacity and
6 energy from June 1995 through May 2010 (Southern UPS). The total summer
7 net capability of the Electric System, Power Park, and Scherer Unit 4 is
8 3,473 MW and the total winter net capability is 3,661 MW. For the purposes of
9 this Need for Power Application, it has been assumed that Kennedy combustion
10 turbine (CT) 4 and CT 5 are in long-term reserve shutdown. Therefore, the total
11 available summer net capability is 3,371 MW, and the total available winter net
12 capability is 3,535 MW in the near term.

13
14 **Q. What is the current status of Kennedy CTs 4 and 5?**

15 A. Kennedy CTs 4 and 5 had been in long-term reserve shutdown earlier this year.
16 However, the Northside CTs 5 and 6 are currently unavailable as a result of a
17 failure of the step-up transformer that these two units share. As a result,
18 Kennedy CTs 4 and 5 have been returned to service while this step-up
19 transformer is repaired or replaced. Upon successful repair or replacement of
20 the Northside CT 5 and 6 transformer, it is planned that Kennedy CTs 4 and 5
21 will return to a long-term reserve status.

22

1 **Q. Are there any planned retirements in JEA's fleet?**

2 A. Similar to Kennedy CTs 4 and 5, it has been assumed that Kennedy CT 3 will be
3 placed in long-term reserve shutdown in 2008. The decision to retire these units
4 will be made after the successful commissioning of Kennedy CT 8 planned for
5 operation in December 2008.

6
7 **Q. Describe JEA's clean power program.**

8 A. JEA is working closely with the Sierra Club of Northeast Florida (Sierra Club),
9 the American Lung Association (ALA), and local environmental groups to
10 establish a process to create and update an action plan entitled "Clean Power
11 Program Action Plan." The "Clean Power Program Action Plan" establishes an
12 Advisory Panel, comprised of participants from the Jacksonville community,
13 who provide guidance and recommendations to JEA in the development and
14 implementation of the Clean Power Program Initiative. Current members of the
15 Advisory Panel include the Sierra Club, ALA, and the newest member, the City
16 of Jacksonville Environmental Protection Board. The Clean Power Program
17 Initiative calls for development of the JEA Clean Power Program Strategic Plan.
18 The JEA Clean Power Program Strategic Plan incorporates practices and
19 technologies including green power, demand-side management (DSM) and
20 efficiency programs, clean fuels, pollution control technologies, and
21 improvements to power generation efficiencies. The Advisory Panel determines
22 the capacity credits obtained from the JEA Clean Power Program Strategic Plan.
23 JEA has installed significant capacity under the JEA Clean Power Program
24 Strategic Plan. JEA currently has approximately 91 MW installed under the

1 JEA Clean Power Program Strategic Plan, including approximately 321 kW of
2 solar photovoltaic capacity, 9 MW of solar thermal capacity, 6 MW in landfill
3 biogas capacity, 800 kW in digester biogas capacity, 10 MW of wind capacity,
4 22 MW of proposed landfill and biomass projects, and 43 MW of generating
5 unit efficiency improvements. Over the past several years, JEA has received
6 several awards for its clean power program.

7

8 **Q. Are there other large clean power projects that JEA has pursued?**

9 A. Yes. In 2001, JEA signed a 15 year power purchase agreement with Biomass
10 Investment Group (BIG) to purchase 70 MW of renewable energy. This
11 developer proposed to grow a biomass crop (e-grass or arundo donax) as a fuel
12 for a gasification plant in Florida. The project has been delayed many times,
13 and since the commercial operation date of this unit is not firm, this project is
14 not included as a resource for JEA's system. Although JEA committed to this
15 project, the developer has not been able to bring it to commercial status as was
16 originally planned. JEA will continue to review this opportunity and other
17 biomass projects as they are presented.

18

19 **Q. Have any of the planned generator efficiency improvements been**
20 **completed?**

21 A. Yes. Turbine upgrades for Northside 1 and Northside 3 have been completed
22 under the Clean Power Program. These improvements have resulted in an
23 increase in capacity without an increase in fuel use. Tables C.4-1 and C.4-2 in
24 the TEC Need for Power Application Exhibit ___ [TEC-1] include 36 MW of

1 additional capacity from these upgrades. To date, approximately 27 MW of this
2 increase has been achieved (18 MW for Northside 3 and 8.5 MW for
3 Northside 1). Northside 2 is planned to have the turbine upgrade implemented
4 toward the end of 2006.

5
6 **Q. Please briefly describe the methodology used to determine the load**
7 **forecasts for JEA.**

8 A. JEA prepares forecasts of both Net Energy for Load (NEL) and peak demand.
9 JEA currently furnishes wholesale power to Florida Public Utilities Company
10 (FPU) for resale in the city of Fernandina Beach in Nassau County, north of
11 Jacksonville. JEA is contractually committed to supply FPU until December 31,
12 2007. Currently, FPU does not have a contract with JEA to renew this sale.
13 Therefore, starting in January 2008, sales to FPU are not included in JEA's NEL
14 and peak demand forecasts. If the FPU contract is renewed, JEA's loads will be
15 higher than forecast.

16
17 The NEL forecast is developed on a monthly and annual basis as a function of
18 time and heating and cooling degree-day data. Inputs into the forecast include
19 historical energy production, JEA territory sales, sales to FPU, and heating and
20 cooling degree-days. The JEA forecast modeling methodology separately
21 accounts for and projects the temperature-dependent and non-temperature-
22 dependent energy requirements over time, then combines these components to
23 derive the system total NEL forecast. The temperature-dependent NEL is

1 modeled as a function of parameter estimates for historical and projected heating
2 and cooling degree-days.

3
4 To forecast peak demand, JEA has developed a nonlinear regression analysis
5 that utilizes Statistical Analysis Software (SAS) and Excel software. JEA
6 develops a forecast of total peak demand, including interruptible and curtailable
7 customers, and then subtracts these customers to derive an estimate of firm
8 demand only. The peak demand forecast is driven by temperature and time-
9 series data. The forecasting process involves the collection of historical hourly
10 system load data and daily temperature data. A nonlinear regression analysis is
11 conducted to forecast the summer and winter peaks. The forecast temperature
12 used in the regression is the 20 year median of the seasonal extreme
13 temperatures (summer 99° F and winter 24° F) wherein the winter seasonal
14 extreme for a year is the lowest temperature during the months of December,
15 January, and February, and the summer seasonal extreme is the highest
16 temperature during the months of July, August, and September.

17
18 **Q. Please summarize the results of the forecast of NEL and peak demand.**

19 A. The NEL is forecast to increase at an average annual growth rate of 2.2 percent
20 during the 2007 through 2024 forecast period. NEL is forecast to increase from
21 14,456 GWh in fiscal year 2007 to 20,851 GWh in fiscal year 2024. These
22 figures assume that FPU requirements are not part of JEA's total NEL beginning
23 January 1, 2008. The results of the NEL forecast are summarized in Table C.3-5
24 of the TEC Need for Power Application, Exhibit ___ [TEC-1].

1

2

During the forecast period, total summer peak demand is forecast to increase at an average annual growth rate of 1.9 percent overall. The annual growth rate in summer interruptible peak demand is 1.5 percent, and the average annual increase in summer firm peak demand is 1.9 percent. During the winter period, the total growth rate in winter peak demand is projected to increase at an average annual growth rate of 2.7 percent. The average annual increase in winter interruptible peak demand is 1.5 percent, and the average annual increase in winter firm peak demand is 2.7 percent. Total JEA peak demand in 2007 is projected to be 3,099 MW in the winter, compared to a summer total peak demand of 2,893 MW. The 2024 total winter peak demand is projected to be 4,856 MW, compared to 3,957 MW during the summer period. A similar pattern holds for the firm peak demand projections. The firm winter peak demand is projected to increase from 2,924 MW in 2007 to 4,630 MW in 2024, and the firm summer peak demand is projected to increase from 2,716 MW in 2007 to 3,729 MW in 2024. The results of the summer and winter peak demand forecasts are summarized in Table C.3-2 of the TEC Need for Power Application, Exhibit ___ [TEC-1].

19

20 **Q. Historically, when has JEA experienced its peak demand?**

21

22

23

A. Since 1986, JEA has experienced its annual peak demand 14 times in the summer and 6 times in the winter. However, recent historical peaks have occurred during the winter in 4 of the past 6 years. As the forecast described

1 above indicates, JEA's season of system peak is transitioning from the summer
2 to the winter, resulting in a divergence of these peaks.

3

4 **Q. Were low and high load and NEL forecasts developed?**

5 A. Yes. Moderate (low) and extreme (high) load forecasts were developed. The
6 moderate case assumes a summer temperature of 93° F and a winter temperature
7 of 30° F. The extreme case assumes a summer temperature of 103° F and a
8 winter temperature of 7° F. In the low case, winter firm demand is forecast to
9 increase from 2,461 MW in 2007 to 3,846 MW in 2024, while summer firm
10 demand is forecast to increase from 2,572 MW in 2007 to 3,684 MW in 2024.
11 Similarly, the NEL for the low case is forecast to increase from 13,808 GWh in
12 2007 to 20,581 GWh in 2024. In the high case, winter firm demand is forecast
13 to increase from 3,462 MW in 2007 to 5,583 MW in 2024, while summer firm
14 demand is forecast to increase from 2,778 MW in 2007 to 3,732 MW in 2024.
15 Similarly, the NEL for the high case is forecast to increase from 16,069 GWh in
16 2007 to 23,597 GWh in 2024. Tables C.3-3 and C.3-6 of the TEC Need for
17 Power Application, Exhibit ___ [TEC-1], show the high and low forecasts.

18

19 **Q. In your opinion is the process used for developing the demand and energy
20 forecasts reasonable for planning purposes?**

21 A. Yes. The process used in developing the demand and energy forecasts is
22 appropriate for planning purposes.

23

1 **Q. How does JEA determine its reserve requirements?**

2 A. JEA determines its reserve requirements by comparing net system capacity and
3 system peak demand plus reserves for the summer and winter peaks. JEA
4 adheres to a minimum 15 percent reserve margin in both the summer and winter
5 seasons. The planning reserve margin covers uncertainties in extreme weather,
6 forced outages for generators, and uncertainty in load forecasts. JEA plans to
7 maintain the 15 percent reserve margin only for firm load obligations.
8 Interruptible load and curtailable load are not considered in setting the
9 15 percent reserve margin.

10

11 **Q. When does JEA forecast a need for capacity?**

12 A. The projected reserve requirements for the winter base case and the summer
13 base case (based on JEA's currently available capacity resources) are presented
14 in Tables C.4-1 and C.4-2, respectively, of the TEC Center Need for Power
15 Application, Exhibit ___ [TEC-1]. The tables show that JEA's capacity will fall
16 below its required 15 percent reserve margin in the winter of 2011/12. At this
17 time, JEA's reserve margin is projected to fall to 13.0 percent, 67 MW short of
18 the 15 percent required reserves. The deficit continues to increase in the winter
19 of 2012/13, when the margin is projected to be 9.7 percent, 182 MW short of the
20 15 percent required reserve margin.

21

1 **Q. Are there any advantages that the installation of TEC will have on fuel**
2 **diversity?**

3 A. Yes. JEA's resource plan calls for continuing its well balanced and diversified
4 mix of fuels with a combination of gas fired, simple cycle CTs as well as TEC.
5 TEC will provide an increase in fuel diversity for JEA's system and Florida as a
6 whole. The project will have the ability to source solid fuels from both domestic
7 and international coal producing regions, including the Powder River Basin
8 (PRB), Central Appalachia, Latin America, and other regions, as well as
9 petroleum coke (petcoke) from the Gulf Coast region and the Caribbean.
10 Historically, the regions from which these coals and petroleum coke will be
11 sourced have experienced less fluctuation in price and generally have had lower
12 commodity prices than oil or natural gas on a \$/MBtu basis.

13

14 As a result, TEC will not only provide additional solid fuel capacity for JEA and
15 Florida, but it will also provide further fuel diversification through the capability
16 to source coal and petcoke from numerous different regions, which will help
17 mitigate exposure to high natural gas and fuel oil prices. The low cost energy
18 from TEC will be beneficial for JEA and Florida in meeting baseload
19 requirements.

20

21 **Q. Are there any advantages that the installation of TEC will have on fuel**
22 **reliability?**

23 A. Yes. The addition of solid-fueled generation increases the reliability of JEA's
24 fuel supply. A coal and petcoke inventory for up to approximately 90 days of

1 operation can be stored onsite, reducing the potential supply disruptions
2 associated with natural gas like those resulting from hurricanes in the Gulf
3 Coast. Furthermore, the ability to store up to approximately 90 days of fuel
4 mitigates potential transportation disruption.

5

6 **Q. Are there any advantages that the installation of TEC will have on the**
7 **stability of JEA electric rates?**

8 A. Yes. TEC will help to satisfy the need for low cost, baseload energy within
9 JEA's service territory and the State of Florida as a whole. Additional low cost,
10 baseload energy from TEC will help to limit electric rate increases for
11 consumers and businesses. In May 2010, JEA's 207 MW purchase agreement
12 with Southern Company expires, leaving JEA with a void in baseload capacity
13 and potentially more dependency on natural gas. TEC will maintain JEA's
14 capacity at approximately 50 percent solid fuel and 50 percent gas and fuel oil,
15 with the ability to produce 70 to 80 percent of the system energy requirements
16 from either fuel type. Electric rate stability will be beneficial for long-term
17 planning and should also help facilitate more stable growth within the economy.
18 In addition, when low cost baseload energy from TEC is available in
19 conjunction with cost-effective DSM measures and biomass, or other renewable
20 energy when available to JEA, even greater benefits to rate stability may be
21 achieved.

22

1 **Q. Will the economic advantages of TEC end after 2035?**

2 A. No. Although economic evaluations have been conducted through 2035 for this
3 TEC Need for Power Application, Exhibit ___ [TEC-1], TEC will be designed
4 for, and is expected to have, a service life significantly greater than the 23 years
5 of operation captured by the analysis period. The benefits of TEC's expected
6 actual service life of 35 to 50 or more years have not been captured in the
7 economic analysis, but are expected to be realized by JEA and the other
8 Participants. Therefore, the total cost savings and benefits of TEC are likely
9 understated in the economic analysis. In addition, JEA's current 2006
10 generation expansion plan has identified a need for additional baseload
11 generating capacity after the commercial operation of TEC.

12
13 **Q. Are there any advantages that the installation of TEC will have on
14 geographic diversity?**

15 A. Yes. For JEA, the other participating utilities, and the State of Florida as a
16 whole, TEC will provide geographic diversity because it will be constructed on
17 a greenfield site. The greenfield site provides JEA with additional baseload
18 generation without increasing the concentration of its generation resources at
19 one location or within its service territory. JEA currently has approximately two
20 thirds of its generating resources located at two adjacent sites (Northside and
21 SJRPP). This diversity should increase the reliability and availability of
22 generating resources, particularly in the event of a local natural disaster affecting
23 forced outages at the adjacent Northside and SJRPP sites.

24

1 **Q. Are there other important factors that JEA considered in its decision to**
2 **participate in TEC?**

3 A. Yes. As discussed in the testimony of Paul Hoornaert, TEC will utilize proven
4 supercritical technology and include the Best Available Control Technology to
5 minimize plant emissions. It was important to JEA that TEC utilize proven and
6 reliable technology and also minimize impacts on the environment. TEC also
7 provides favorable economies of scale, with sharing of risk associated with
8 owning and operating a large project.

9

10 **Q. How does JEA intend to finance the construction of TEC?**

11 A. JEA typically finances large generation capital projects using fixed and floating
12 rate subordinate long-term debt. Up to a maximum of 30 percent of the debt
13 may be floating rate. During the preliminary design, engineering, and
14 permitting, JEA may use internal funds from operations or from prior issuances
15 to fund early project costs. As the initial development concludes and
16 construction commences, JEA may initiate various series of revenue bond
17 issuances for long-term financing with terms of up to 30 years. For large
18 projects, JEA may issue bonds every 1 to 2 years to cover expected construction
19 related capital costs over these periods. By having multiple issuances, JEA will
20 limit the amount of interest incurred during the construction of the plant. In
21 addition, JEA may pool the financing for TEC with other smaller capital
22 addition costs that may be required concurrent with TEC. JEA's senior electric
23 system debt has very favorable ratings of AA- from S&P, Aa2 from Moody's
24 Investor Services, and AA- from Fitch. To protect against fluctuations in the

1 interest rate, JEA may use interest rate swap contracts to take advantage of
2 favorable market conditions and caps to limit the risk associated with variable
3 rate debt.

4

5 **Q. In your opinion will JEA be able to obtain the financing for the**
6 **construction of TEC?**

7 A. Yes. Based on the project's favorable economics and JEA's excellent credit
8 rating, JEA will be able to issue debt to cover its share of the project cost.

9

10 **Q. In your opinion is the economic analysis performed and represented by**
11 **Black & Veatch consistent with JEA's analysis?**

12 A. Yes. The results of the economic analyses performed for JEA by Black &
13 Veatch and presented in the Need for Power Application (Exhibit ___ [TEC-1])
14 are consistent with JEA's own Integrated Resource Plan.

15

16 **Q. Does this complete your testimony?**

17 A. Yes.

1 BY MS. RAEPPLE:

2 Q Have you prepared a summary of your testimony?

3 A Yes, I have.

4 Q Would you please present that summary.

5 A Yes. Let me make sure I've got the right glasses.

6 Excuse me.

7 JEA is the largest municipal utility in the State of
8 Florida. With our forecasted demand growth we are projected to
9 fall below our 15 percent reserve margin during the winter of
10 2012. Our portion of the Taylor Energy Center will provide us
11 with 241 megawatts of generation to address this shortfall.

12 We continue to pursue our voluntary 7.5 percent clean
13 power goal with financial incentives to our customers to
14 install solar thermal water heating systems, economic
15 participation in a midwest wind farm, the use of landfill gas,
16 digester biogas and yard waste biomass for electric generation,
17 and generator efficiency improvements.

18 We promote conservation through energy audits, solar
19 incentives, Green Built Homes, consumer education, chilled
20 water services and interruptible load. We continue to canvass
21 the marketplace for available purchased power related to
22 renewable fuels and energy. As a result of a previous request
23 for proposal we have completed negotiations to purchase power
24 from a future large landfill gas plant and a future yard waste
25 biomass plant.

1 The Taylor Energy Center will provide us with a
2 continued diversified portfolio of fuels replacing an expiring
3 coal-fired purchased power agreement. Taylor Energy Center
4 will maintain our capacity at approximately 50 percent solid
5 fuel and 50 percent gas and fuel oil. The geographic diversity
6 of Taylor Energy Center will also minimize the disruptions of
7 energy production and fuel delivery due to local events such as
8 natural disasters. This concludes my summary.

9 MS. RAEPPLE: Thank you. I'd tender the witness for
10 cross-examination.

11 CHAIRMAN EDGAR: Thank you.

12 Ms. Brownless. Mr. Simms.

13 MR. SIMMS: Thank you very much.

14 CROSS EXAMINATION

15 BY MR. SIMMS:

16 Q Good morning, Mr. Gilbert.

17 A Good morning.

18 Q I believe you've been sworn in already. I just
19 wanted to confirm that you're still under oath. You understand
20 that?

21 A Yes.

22 Q Thank you. Do you have a copy of your prefiled
23 testimony?

24 A Yes, I do.

25 Q On Page 4 of your prefiled testimony, Line 7, you

1 reference JEA's clean power program.

2 A Yes.

3 Q Does this program currently include a demand-side
4 management component that seeks to achieve reductions in
5 customers' demand for electricity?

6 A Yes. Any, any program related to renewable energy
7 that's applied to the customer side is considered part of the
8 clean power program.

9 Q So the components of the clean power program that
10 address customers' demand for electricity are the incentives
11 for renewables?

12 A I'm sorry. I did not hear the question very clearly.

13 Q The, the demand-side management components of the
14 clean power program that seek to achieve reduction in customer
15 demands consist of incentives for renewables, utilization of
16 renewables.

17 A Yes. Yes. Our solar thermal water heater program is
18 an example of that.

19 Q Okay. Are there any other demand-side management
20 programs that are part of the clean power program that are,
21 that are efficiency, specifically efficiency-related programs?

22 A Well, currently not at this time. The clean power
23 program is, is, I guess, authored under an advisory panel.
24 That advisory panel advises us as to which programs would be
25 applicable towards meeting our goal.

1 Q So, so at this point the clean power program does not
2 include DSM measures that are specifically targeted at energy
3 efficiency?

4 A At this point that is correct.

5 Q Did JEA assess new DSM opportunities, demand-side
6 management opportunities in connection with this application?

7 A Yes. There was an evaluation done in this
8 application for DSM.

9 Q Do you know if that assessment compared the levelized
10 cost of each measure to the levelized cost of power from the
11 TEC?

12 A I will -- I'll have to say that the analysis and the
13 work done related to DSM is best addressed by our expert
14 witness that's providing testimony later on.

15 Q And I just want to confirm, is that Mr. Kushner?

16 A That's correct.

17 Q Thank you. Are you aware of current DSM measures
18 that are available to JEA customers or that they're actually
19 implementing energy efficiency-related DSM measures that your
20 customers are implementing?

21 A Well, we, we have, as I mentioned earlier, we have
22 several programs that JEA continues to, to support for our
23 community and those include energy audits. Those energy audits
24 allows us to go into the customers' residence or commercial or
25 industrial premises and make recommendations for improvements

1 to their end-use equipment that the customers may elect to
2 implement.

3 Q So to your knowledge is the energy audit program the
4 only energy efficiency focused DSM measure that JEA is
5 implementing?

6 A Well, the, the other program that I mention in my
7 summary that is mentioned in the application is our initiative
8 on what we call Green Built Homes. Green Built Homes is an
9 emerging, very important program to our community. And we're
10 working closely with the North Florida Builders Association to
11 have the, the builders adopt the federal EPA Energy Star®
12 standard.

13 Q Is that primarily an informational program where you
14 provide information to --

15 A Well, we actually incentivize the builders with, with
16 a rebate and also we promote their homes as a competitive
17 solution to traditional homes.

18 Q Okay. So those two DSM programs, the green building
19 and the energy audits, are the two that you're aware of that,
20 that JEA is involved in now?

21 A That's correct. Well, and I might add, if you don't
22 mind, that consumer education is very important and it's one of
23 the biggest roles that electric utilities can do is to educate
24 our consumers on opportunities they have for improving the
25 efficiencies of their homes. And not only do we have the

1 energy audits, but we also do promotional campaigns,
2 literature, we go to the school systems, et cetera. So we do
3 believe in that program.

4 Q Thank you. You also testified about fuel diversity
5 in your testimony. I believe on Page 11 of your testimony,
6 Lines 5 to 6, you state that "TEC will provide an increase in
7 fuel diversity for JEA's system."

8 A Yeah. Let me catch up with you. I apologize. I
9 have to -- it helps me to swap my eyeglasses to see him
10 speaking and then having to read. I appreciate your patience
11 on that. It was Page 11?

12 Q Page 11, Lines, really Lines 1 through 12.

13 A Yes.

14 Q Do you, do you know approximately what the breakdown
15 of JEA's generating capacity by fuel type will be in, in 2015
16 with and without TEC?

17 A With and without TEC?

18 Q Yes.

19 A No, I have not calculated that. I believe
20 Brad Kushner has performed a late filing that addressed the,
21 the diversity projections.

22 Q Are you aware of the responses to NRDC's first set of
23 interrogatories, Number 22 and Number 23? I will, I will
24 provide you with a copy of that.

25 A I appreciate it. Thank you.

1 We're starting with 22?

2 Q Starting with 22. I want to make sure that I
3 understand these. These are a couple of pie charts that
4 reflect, several pie charts indeed that reflect the division of
5 JEA's generating capacity by fuel type for several different
6 time periods, 2015, 2020, 2025, 2030 and 2035, in response
7 Number 22. Is that, is that correct? Is that what you see
8 there on the --

9 A Well, these are very difficult, these reproductions
10 are very difficult to, to look at. I think it's clear enough,
11 but let me see if I can figure it. So the first page has 2015
12 and 2020.

13 Q Correct.

14 A The second page has 2025 and 2030.

15 Q Correct.

16 A And the third page has 2035.

17 Q That's right.

18 A Okay.

19 Q And, and for number -- this is still looking at
20 number, response Number 22. This reflects, is it correct, the
21 JEA's resource capacity by fuel type based on generation
22 expansion plan outlined in Table C5-6, which is Expansion Plan,
23 Economic Summary with Taylor Energy Center? And I believe that
24 table is attached to the last two pages of --

25 A I'm more than happy to work with you and go through

1 this line of questioning, but I think Brad Kushner, our expert
2 witness on this, can address it quicker than I can. But --

3 Q Well, I wanted to talk quickly with you because you
4 did testify about fuel diversity and TEC being valuable to JEA
5 for purposes of, of fuel diversity.

6 A Yes.

7 Q So if you wouldn't mind bearing with me, just -- I'll
8 try not to make this too difficult. And the point I want to
9 make -- let's just look at a couple of examples here and then
10 we'll -- instead of trying to look at all of these. Let's just
11 focus on 2015.

12 A Okay.

13 Q So would you agree on the first page, the pie chart
14 entitled 2015, that coal represents 52.7 percent of the
15 generating capacity for JEA according to that table?

16 MS. RAEPPLER: Your Honor, at this point I'd like to
17 object to this line of questioning because counsel is simply
18 asking the witness to read the document. The document speaks
19 for itself. And it seems to me we're wasting a fair amount of
20 time.

21 CHAIRMAN EDGAR: Mr. Simms, as you know, and this, of
22 course, goes to everybody, not to just single you out, but we
23 are under some time constraints.

24 MR. SIMMS: Okay.

25 CHAIRMAN EDGAR: And so I want to, of course, allow

1 you to ask the questions that you need to ask and build the
2 record that you need to build. However, the witness has said
3 that there's another witness that is better positioned. So do
4 what you need to do, but let's keep it moving.

5 MR. SIMMS: I will do that, Madam Chairman. Thank
6 you. What I will do instead, we will, we will raise this issue
7 with Mr. Kushner later. He obviously has a better
8 understanding of it.

9 BY MR. SIMMS:

10 Q Let me just, let me just boil down the question for
11 you.

12 Would you agree that in, in 2015 the, the difference
13 with and without the Taylor Energy Center in JEA's analysis is
14 in the range of 50 percent in either instance, 50 percent coal
15 as part of JEA's generating capacity with or without TEC?

16 A You know, the 2015 time frame includes Taylor Energy
17 Center as part of a plan which includes additional coal-fired
18 generating units after Taylor Energy Center. The plan -- based
19 on the economics of that plan, it chose to add additional
20 coal-fired generating units. With that addition of this unit
21 that we haven't yet vetted or even made final determination to
22 add, certainly in this particular 2015 time frame, if you took
23 Taylor Energy Center out and left that CFB in, yes, you would
24 still have about a 50 percent --

25 Q The analysis upon which these tables are generated

1 shows that the, the approach with Taylor and the approach
2 without Taylor, both is in the range of 50 percent coal
3 capacity.

4 A Yeah. That's, that's true.

5 Q And just jumping to another year, 2030, it's roughly
6 the same scenario with, with, according to these tables, around
7 56 percent coal capacity in 2030 with -- or in the scenario
8 with or the scenario without TEC. And that's the last pie
9 chart in each, each scenario.

10 A Yes. Is there a question?

11 Q Yeah. Just asking whether that was accurate, it's
12 roughly 60 percent coal capacity in either, either with Taylor
13 Center, Taylor Energy Center scenario or without Taylor Energy
14 Center.

15 A Well, I would think when you look out to 2030 in that
16 particular pie chart, that includes additional, additional
17 generating units that's beyond Taylor Energy Center, two
18 coal-fired, maybe even three coal-fired power plants, lots of
19 different gas-fired generating units. And so when you start
20 looking out that far in time, it's hard to make a correlation
21 to what the benefit of Taylor Energy Center would be for fuel
22 diversity.

23 Q I understand. But these are analyses that JEA did
24 prepare; correct?

25 A These, these are analyses that --

1 Q Or that Mr. Kushner prepared for JEA. I'm sorry.

2 A Yes. These are JEA -- yeah, these are analyses for
3 JEA's system.

4 Q And they are analyses that were intended to reflect a
5 scenario with TEC and a scenario without TEC to break down the,
6 the, to break down the generating capacity.

7 A Well, I just want to be, I want to be clear because
8 I'm not sure the exhibit actually shows both pie charts with
9 and without. Am I clear on that?

10 Q The -- I'm sorry. If you look at the introduction to
11 Question 22, it is reflecting expansion plan as laid out in
12 Table C5-6, and Question 23, which is, which is a scenario with
13 TEC. Do you see that?

14 A Yeah.

15 Q And that's, that's correct?

16 A Yeah.

17 Q And Number 23 is laying out the generation expansion
18 plan outlined in Table C5-7, which is the scenario without
19 Taylor Energy Center; is that correct?

20 A Right. Right. Are you -- I guess I'm trying to
21 understand the question. I agree that this -- I agree with
22 everything you're saying what the paper illustrates. I just
23 don't -- I just --

24 Q I just wanted to confirm with you that the tables
25 that we pointed to show generally the same coal capacity for

1 JEA, percentage of coal capacity for JEA with or without Taylor
2 Energy Center based on these tables. Is that correct?

3 A Well, you know, when you, when you get up to large
4 system capacity and you're talking about Taylor Energy Center
5 representing 241 megawatts, that's roughly only a percent or
6 two of our system. And I think what, what you're saying here
7 is, is that Taylor Energy Center, when you start looking out
8 that far in time, doesn't, doesn't make a big difference in the
9 swing of our diversity because it's only 1 or 2 percent of our
10 total installed capacity. Is that what you're trying to
11 illustrate?

12 Q I really wanted to just ask the question is that what
13 these charts show that --

14 A Well, yes.

15 Q Comparing the information in those two tables, the
16 percentage of capacity that is associated with coal is roughly
17 the same with and without TEC based on these tables; is that
18 correct? Just the information that's on the page.

19 A Roughly the same. Roughly the same.

20 Q Thank you. I'll move on. I'm sorry that took a
21 little while.

22 As a utility that gets about 50 percent of its
23 capacity from coal, do you believe that JEA would be
24 substantially affected by future CO2 regulation?

25 A Well, you know, I will say that there certainly has

1 been a lot of discussion about CO2 and greenhouse gas
2 constrained economies. And right now there's no legislation,
3 so it certainly is a much, much speculative situation.
4 However, you know, being a good energy utility planner, it just
5 makes sense to us to look at CO2 as a possibility.

6 Q And is that because as a utility with a significant
7 amount of coal capacity it potentially would have a significant
8 impact on your operations?

9 A Well, we're not, we're not sure whether it's going to
10 have a significant impact. We, we certainly believe that fuel
11 diversity helps mitigate impact of any one fuel fluctuation.

12 I will just tell you, you know, going back into the
13 '80s, the '70s actually, early '80s at JEA, some of you may not
14 have known this, but we were almost a 100 percent oil-fired
15 utility. When the oil embargos hit in the '70s, our electric
16 rates skyrocketed because we were dependent on one fuel. We
17 since then have added -- well, we did a pretty good job of
18 reacting fairly quickly to that by adding transmission systems
19 that tied us into Georgia where they have a significant amount
20 of coal and we did a coal-by-wire transaction. We're still
21 doing that today.

22 Then we -- that bought us some time to build the
23 Power Park Plant that has been running successfully for 25
24 years. And recently, in the last five years, we were able to
25 add new technology, new clean coal technology that was leading

1 edge with our North Side 1 and 2 repowering projects. We are
2 now at a 50 percent level, and that 50 percent level has been
3 serving our customers with our rate structure very well.

4 Q Let me ask a question a little bit differently. Do
5 you believe that it's important for JEA to consider the
6 likelihood of CO2 regulation in its planning, given its
7 reliance on coal?

8 A Well, I think it's important as prudent utility
9 planners to look at that and to look at the sensitivity of
10 that, yes.

11 Q Has JEA commissioned any forecasts of CO2 emission
12 allowance prices aside from what shows up in this, in this
13 application?

14 A We, we haven't commissioned any outside help on this.
15 We have a very good legislative affairs group at JEA. They,
16 they sort through all the myriad of legislation and look at all
17 the potential impacts each legislation may have. And what we
18 asked them to do was to look at which, which legislation might
19 be most probable coming down the pike, and, of course, the most
20 popular one is McCain-Lieberman. And they looked at
21 McCain-Lieberman, they did an analysis on that particular
22 proposal, and found that there's a lot of open ends to that
23 proposal, a lot of escape clauses or a lot of undefined
24 requirements.

25 And when -- and upon doing that, they found, they

1 went to a well-renowned resource, the National Commission on
2 Energy Policy, and looked at their recommendation that was made
3 to the administration, White House Administration and to the
4 Congress and came up with a CO2 tax trend that we applied to
5 our production costs. And one thing I will say is that was a
6 very conservative application that we did because the trend,
7 the way we applied it, did not take into account the effects
8 that the legislation might have on the price of coal or the
9 price of gas.

10 It is our opinion if the legislation was enacted,
11 that there would be an interrelationship, an interdependency
12 with the fuel products. It would cause the gas prices to go up
13 because the utilities would be reacting to that legislation in
14 one form or another, either through redispatch or their
15 generating fleet or through building of gas-fired plants. Now
16 with that response, gas prices would go up, but we did not
17 model the gas prices going up in our internal work.

18 Now in the need, in this need for power application,
19 you'll hear later from our expert witness Matt Preston that he
20 did take into account the interrelationship between CO2 effects
21 and the fuel products.

22 Q Is, is the JEA's internal analysis a part of the
23 record for this proceeding?

24 A It has not been asked to be submitted as part of the
25 record for this proceeding.

1 Q Do you know whether the, the results with respect to
2 CO2 costs in that analysis are the same as or different than
3 the, than the analysis done by Mr. Preston?

4 A What we found, and I did do a benchmark of that, what
5 we found was that our particular application of the, the
6 projections for CO2 tax trended up. We trended up at
7 2.5 percent per year to hold the value constant in real terms
8 over the study period. It showed a trend line that some, some
9 years was higher and some years were lower on the trend lines
10 between, between our forecasts and the one used in the need
11 application.

12 Q Do you, do you know whether the baseline for the
13 assumptions in the internal analysis of CO2 costs that JEA
14 performed was to hold CO2 levels constant; that the assumption
15 was that the legislation would require that CO2 be held at a
16 constant level into the future as opposed to an increasing or a
17 decreasing cap on CO2?

18 A Well, the, the National Commission on Energy Policy,
19 their recommendation was primarily for the federal government
20 to intervene on the, on the prices, if they, if they went over
21 a certain level.

22 What we did in our modeling, our internal modeling
23 was we decreased the allowances over time as proposed by
24 McCain-Lieberman.

25 Q But the total CO2 cap, assumption about the total CO2

1 cap over time, did that cap increase or decrease or remain
2 constant?

3 A You're talking about the cap on allowances?

4 Q Yeah, the total cap for CO2.

5 A Yes. We decreased it over time.

6 Q You decreased the cap over time. Okay.

7 Do you know by how much?

8 A I believe what we did was we started with a
9 90 percent level and decreased it a half percent a year until
10 it reached, quite frankly, I can't recall, but until it reached
11 maybe an 80 percent level.

12 Q Thank you. And the results of that were a little bit
13 different than -- I think you testified that the results of
14 that were a little bit different than the results of
15 Mr. Preston's analysis.

16 A Well, again, I really would like to defer this
17 question because our expert witness would, would certainly be
18 able to shed better --

19 Q I understand. And Mr. Preston is familiar with your
20 internal analysis?

21 A Well, he may not be familiar with my internal
22 analysis, but I'm not as familiar with his work either. So I
23 can't really compare them.

24 Q I understand. Thank you.

25 Would you agree that there is little or no available

1 base load capacity for sale in the Florida market?

2 A Well, I will, I will agree that today if we went out
3 on the market to buy baseload capacity, that it's nonexistent.

4 The -- if you build -- if somebody comes along and
5 builds baseload capacity with low variable costs like a solid
6 fuel plant, that would certainly make, that would certainly
7 have marketability in Florida.

8 Q So to the extent that JEA didn't use its share of the
9 TEC capacity, you expect that there would be a ready market for
10 that in Florida?

11 A There would be a ready market not only for hourly
12 economy, which is what we do routinely in Florida, but also for
13 long-term or short-term purchased power agreements.

14 Q And do you expect that JEA could, assuming that there
15 was capacity to sell, could sell its capacity at a premium?

16 A I have to have you qualify what you mean by premium.

17 Q Well, I mean a price that's slightly lower than, than
18 combined cycle capacity.

19 A I'm sorry. I got lost with the question. Could you
20 try me again?

21 Q Sure. To the extent that, that JEA didn't use its
22 share of the TEC capacity, would it be able to sell that
23 capacity in the Florida market at a premium, meaning at a level
24 that's only slightly lower than combined cycle capacity?

25 A Well, we -- that's certainly a possibility. I will

1 tell you that JEA uses an energy marketer that would market
2 that, that excess capacity on an hourly or a monthly or annual
3 basis as we direct them to to anybody who's willing to buy it
4 at the, at the going markets prices.

5 Q Yeah. And you agree that is a relatively tight
6 market at this point.

7 A Is what?

8 Q It's a tight market at this point. It's a -- there's
9 not much out there.

10 A Oh, yes, I guess so.

11 Q Okay. I'm almost finished.

12 Does JEA have any industrial customers?

13 A Yes, we do.

14 Q Do you have any manufacturing customers?

15 A Yes, we do.

16 Q Are -- is it your understanding that Mr. Kushner's
17 evaluation of DSM cost-effectiveness for JEA was done on a
18 consolidated basis for all the TEC participants?

19 A I'm sorry. I really didn't understand that question.

20 Q I'm sorry. Is it your understanding that
21 Mr. Kushner's evaluation of DSM was conducted on a, on a
22 consolidated basis for all the TEC participants, that he did an
23 analysis that looked at a consolidated demand for all, all of
24 the participants?

25 A Well, that's not my understanding, but I'm sure Brad

1 will be able to enlighten all of us. But what I saw in the
2 application was an analysis done for JEA.

3 Q Okay. So he did an individual utility basis analysis
4 for JEA.

5 Okay. Do you know how many, if any, of the DSM
6 programs that were looked at in that analysis are actually
7 being offered to JEA members, if any?

8 A Out of the, out of the 180 measures that I saw in the
9 application, which appears to cover an extensive amount of
10 end-use load that would be represented in our community, I did
11 not see any measures that passed the rate impact. So if the
12 question is are any of those measures currently today being
13 offered to our customers, are we incentivizing our customers
14 to, to perform those measures, I'd say no.

15 Q And you don't know whether your customers are
16 actually using any of those measures aside from whether you're
17 incentivizing them or not?

18 A Well, I, you know, certainly customers are doing,
19 there's a lot of customers out there doing lots of things that
20 are improving their energy efficiency, whether it's building
21 envelope or lighting or whether it's appliance or machinery
22 efficiency improvements.

23 One thing I will say that JEA does as part of our
24 educational process in our outreach to the customers is we look
25 at those results that come out of the, that type of analysis.

1 And if those results show that there's things that customers
2 can be doing that benefit them that doesn't affect our other
3 customers, we will communicate that to them and share that
4 information and give them the opportunity to implement those
5 improvements.

6 Q So is it correct that JEA does not, does not evaluate
7 what its customers are doing on its own, so you don't know
8 whether your customers are using, specifically whether your
9 customers are using any of these DSM measures or not?

10 A Well, I'm not sure what purpose from my perspective
11 that I'm representing here, what purpose that information would
12 provide to me in helping me with my energy planning. But so --
13 the reason I'm going to answer it this way is there may be
14 certainly other groups within JEA that are gaining that
15 information directly from their customers because we have major
16 account reps that may be gaining that information from their
17 customers, but it has no direct bearing on, on how I do my
18 utility planning.

19 Q I see. So you don't have that information.

20 A That's correct.

21 Q Okay. Do you know what the annual demand growth for
22 JEA has been over the past five years?

23 A Well, I mean, the average annual demand growth?

24 Q Yes.

25 A I'd have to calculate it. I could give you a ball

1 park figure.

2 Q That would be fine.

3 A You know, it's 2.5 percent approximately.

4 Q Do you know over the last ten years is it roughly the
5 same or different?

6 A You know, I really would, would have to look that up.
7 And, and -- I mean, I've got that information, I can go look it
8 up, but I don't -- you got a specific question maybe?

9 Q Yeah. Let me ask you, let me ask you --

10 CHAIRMAN EDGAR: Let me, let me interject again.

11 MR. SIMMS: Sure.

12 CHAIRMAN EDGAR: We do need to keep it moving. If
13 you are not able to answer the question, you can tell us that
14 you're not able to answer the question. If you can answer the
15 question, you have an obligation to answer.

16 THE WITNESS: Yes. Got it.

17 CHAIRMAN EDGAR: Thank you.

18 BY MR. SIMMS:

19 Q Perhaps you can answer this. I'll ask one last
20 question on that. Would you say over the last ten years that
21 it's greater than 1 percent on average?

22 A Yes. I would say in the last ten years our
23 Jacksonville demand growth is greater than 1 percent on
24 average.

25 Q Thank you. That's fine. Thank you.

1 And are you JEA's representative on the TEC Operating
2 Committee?

3 A You know, I'm not the representative on the TEC
4 Operating Committee. I'm not sure we have formed an operating
5 committee yet.

6 Q Are you, are you the person who's involved for JEA in
7 the process of making major decisions about TEC and planning?

8 A In what regard?

9 Q Speaking on behalf of JEA with, in the
10 decision-making with respect to TEC.

11 A You know, it's a major project with lots of facets to
12 it and there's lots of people involved in different phases and
13 facets. Do you --

14 Q Okay. Let me ask -- I'm sorry. I didn't mean to
15 interrupt you.

16 A No. That's okay. Go right ahead.

17 Q I'll ask a bit more of a specific question.

18 With respect to the decisions about the site
19 certification application being filed with DEP, are you the
20 person at JEA involved in making, collectively making the
21 decision on the TEC project with respect to the site
22 certification application?

23 A No, I am not the person responsible for the SCA.

24 Q Do you know who is responsible within JEA for making
25 those decisions collectively about the TEC project?

1 A Relative -- again, are you, are you talking about the
2 entire project, are you talking about just the SCA? I need
3 some --

4 Q That's okay. I'll ask one, one last question.

5 Do you know whether, whether the participants have
6 decided the number of megawatts that will ultimately be
7 requested of DEP in the site certification?

8 A I do not know.

9 Q Do you -- has the site certification been filed?

10 A I don't know if the site certification has been
11 filed.

12 MR. SIMMS: Okay. Thank you.

13 CHAIRMAN EDGAR: Mr. Paben.

14 CROSS EXAMINATION

15 BY MR. PABEN:

16 Q Just a few quick questions, Mr. Gilbert.

17 Mr. Gilbert, is JEA a member of the American Public
18 Power Association?

19 A Yes, we are.

20 Q Are you aware that the American Public Power
21 Association has said that it expects a federal policy on CO2 to
22 be set by 2010?

23 A I'm not aware. I'm sure my legislative affairs
24 director would be.

25 Q Okay. It was -- would you be surprised if it was

1 reported in Platts last month?

2 A Would I be surprised?

3 Q To learn that that was the American Power, Public
4 Power Association's position?

5 A I think, you know, any emerging information is a
6 dynamic -- you know, what's going on now in our industry is
7 very dynamic and there's -- I wouldn't say it would surprise
8 me, no.

9 Q My colleague is bringing the article just to show
10 you.

11 CHAIRMAN EDGAR: Did you get a copy to the
12 applicants?

13 MS. PABEN: We're walking it around, Mr. Jacobs is.

14 CHAIRMAN EDGAR: It's coming.

15 Okay. Mr. Paben, I'm sorry, what are we doing with
16 this?

17 MR. PABEN: I was just showing it to Mr. Gilbert and
18 asking him if he agrees with that expectation.

19 MS. RAEPPLE: Madam Chairman.

20 CHAIRMAN EDGAR: Ms. Raepple.

21 MS. RAEPPLE: If counsel is going to ask this witness
22 to agree with a document, this is a four-page document that
23 he's handed out, I think the witness needs to be given an
24 opportunity to review it, and this may take obviously a fair
25 amount of time.

1 THE WITNESS: Well --

2 MS. HELTON: May I ask a question?

3 CHAIRMAN EDGAR: Yes.

4 MS. HELTON: Perhaps it would help me understand the
5 relevance if I could understand where in the direct testimony
6 this relates.

7 MR. PABEN: It's a coal-fired power plant and this
8 is, they're a member of this, you know, association group, and
9 its expected costs to come online before this plant --

10 MS. HELTON: Where has the witness testified in his
11 direct testimony that this would directly relate?

12 MR. PABEN: It's -- he's testified to the cost of the
13 plant and to the cost-effectiveness of TEC.

14 MS. HELTON: It strikes me that counsel has not yet
15 laid a foundation for this and maybe that would help some.

16 CHAIRMAN EDGAR: Mr. Paben, do you need to take the
17 time to lay a foundation, if indeed, if indeed you can, or do
18 we need to move on?

19 MS. RAEPPLE: Madam Chairman, I would point out --

20 CHAIRMAN EDGAR: Ms. Raepple.

21 MS. RAEPPLE: -- that the witness has on several
22 occasions noted that it was Mr. Kushner who did this kind of
23 analysis. And so perhaps these questions would be better
24 reserved for Mr. Kushner.

25 MR. PABEN: I mean, all I can refer back to is the,

1 you know, the cost-effectiveness of the plant and whether this
2 was, you know, included as a cost.

3 CHAIRMAN EDGAR: Okay. Then I think what I'm going
4 to request is that we move on.

5 MR. PABEN: Okay.

6 CHAIRMAN EDGAR: There will be the opportunity before
7 we get to Mr. Kushner perhaps for Mr. Kushner to review the
8 document and you can see if it is a line of questioning that
9 you want to pursue with him and if, indeed, it is appropriate
10 at that time, which is not a determination I'm making now.

11 MS. PABEN: Okay.

12 CHAIRMAN EDGAR: Further questions.

13 MR. PABEN: That'll be all. Thank you, Mr. Gilbert.

14 CHAIRMAN EDGAR: Thank you.

15 Mr. Jacobs.

16 MR. JACOBS: Thank you, Madam Chairman.

17 CROSS EXAMINATION

18 BY MR. JACOBS:

19 Q Good morning, Mr. Gilbert.

20 A Good morning.

21 Q In your testimony I believe you spoke to the issue of
22 how TEC is going to affect the fuel diversity for, for JEA.

23 Were you aware of Mr. Fetter's testimony yesterday,
24 direct testimony?

25 A Yes. I think I heard his testimony, yes.

1 Q And subject to check, he indicates that the primary
2 motivation for fuel diversity in this application is to, is to
3 move away from a reliance on natural gas. Subject to check,
4 would you accept that as Mr. Fetter's testimony?

5 MS. RAEPPLER: Objection, Your Honor. I don't believe
6 that this is an accurate characterization of Mr. Fetter's
7 testimony.

8 CHAIRMAN EDGAR: Mr. Jacobs?

9 MR. JACOBS: I'll move on.

10 BY MR. JACOBS:

11 Q Is JEA in a position where it needs to diversify away
12 from natural gas?

13 A I apologize. I got a little --

14 Q Is JEA in a position where it needs to diversify away
15 from natural gas because it relies too heavily on it?

16 A You know, that's a very open-ended question. I will
17 answer it this way. If the, if the economics of, of your fuel
18 mix moves you more to a balanced mix of fuel, that's, that's,
19 that's a bonus. You know, if the economics show that you're
20 moving towards a more balanced fuel from a capacity
21 perspective, then that fuel diversity is valuable.

22 Q And it's your testimony that TEC does that for JEA?

23 A Yes.

24 Q Okay. You addressed the issue in financing of TEC on
25 behalf of JEA; is that correct?

1 A Yes. Can you refer me to --

2 Q You do so in your direct testimony at, on Page 14,
3 beginning at Line 10, and you do so in your deposition on
4 Page 51, beginning at Line 12.

5 Are we there?

6 A Direct me again to my testimony. What page and line?

7 Q Page 14, beginning at Line 10.

8 A That's in my testimony. How about my deposition?

9 I'm sorry.

10 Q Your deposition, Page 51, beginning at Line 12.

11 A They're two different subject matters.

12 Q I'll take that, that there is, there are variations,
13 but I'll direct my questions appropriately. I just want to
14 make sure we're aware of where you, where you address those
15 issues.

16 You state in your deposition that the debt service
17 for TEC is the place where you captured the effects of
18 variations in capital costs; is that true?

19 A We're referring to my, the deposition Page 51, Line
20 12?

21 Q Page 51 beginning at Line 12. The question -- if you
22 like, I can read it.

23 A Yes, please.

24 Q Okay. Do you -- "Question: Did you do a sensitivity
25 study for an increasing construction cost when you did your

1 original model?"

2 "Answer: No. I can clarify."

3 "Question: Please clarify."

4 "Answer: We did a sensitivity study for the effects
5 of increasing financial requirements for the capital costs in
6 the form of interest rate variables."

7 Do you see that?

8 A Yes.

9 Q Okay. So you did, you did a sensitivity study where
10 you looked at the present 19 percent increase in capital costs
11 for TEC and what impact that would have on your financing?

12 A This line of questioning was --

13 Q If you would do me a favor so we can accommodate the
14 Chair, Madam Chair, just give me a yes or no and then go on
15 with your explanation.

16 A Then I need to have the question asked again.

17 Q Okay. Did you do a sensitivity analysis for the
18 19 percent increase in capital costs for TEC and its impact on
19 your financing costs?

20 A No. This, this -- in reference to -- this line of
21 questioning in the deposition wasn't related to the sensitivity
22 of the increasing capital costs for Taylor Energy Center. This
23 line of questioning was related to how we reflected in our IRP
24 work a sensitivity for an increasing capital cost for all of
25 our alternatives.

1 And the way that we did it in the JEA IRP work,
2 instead of increasing our alternatives with an absolute percent
3 increase in capital costs, we looked at the sensitivity of
4 using higher interest rates. Now the higher interest rates and
5 increasing capital costs, they both get you to the same point.
6 They both get you to alternatives that are, are higher in debt
7 service cost going forward. Our method in our IRP was to use
8 interest rates to reflect the increase in cost of ownership.
9 The method in the need for power application was to increase
10 the cost of the alternatives to represent the cost of
11 ownership.

12 Q Have you gone -- have you, have you come to any
13 conclusion as to what impact the increasing capital costs will
14 have on your financing costs?

15 A Yes. We've, we've got some pretty good feedback on
16 that from our rating agencies. The Taylor Energy Center
17 project has been, has been vetted through our rating agencies
18 for two years. The, the increasing capital cost that was
19 announced occurred before our last rating agency review, and
20 they were, they were receptive to that. They were -- there was
21 no negative outlook for that increase.

22 Q I'm sorry. Go ahead.

23 A There was no negative outlook for that increase and,
24 therefore, we, and I don't know the final results, but we don't
25 suspect we're going to see any changes in our rating for our,

1 from our rating agencies.

2 Q That's from your bond rating agencies.

3 A That's correct.

4 Q And how about your debt service companies?

5 A The -- I'm sorry.

6 Q You're going to incur debt, you're going to borrow
7 money to finance this; correct?

8 A That's correct.

9 Q You indicated to me you're going to -- and I believe
10 your testimony reflects in the long-term you're going to issue
11 bonds, but immediately you're going to do, you're going to
12 borrow money.

13 A Yes.

14 Q I think what you answered to me just now was that
15 your bonding rating companies aren't anticipating a change in
16 your rating.

17 A Correct.

18 Q My question now is then are your, are your lenders,
19 potential lenders, do they anticipate any modification in this,
20 in this issue?

21 A The answer is no. The outlook from our rating
22 agencies usually is indicative of what we actually realize in
23 the market.

24 Q Okay. Did you do an analysis of debt service
25 requirements that assume the transmission upgrade costs for TEC

1 would be allocated to the applicants and not to the
2 transmission owners?

3 A Okay. If you don't mind going over that one more
4 time with me, I appreciate it.

5 Q Okay. You're aware -- I'm sorry. I don't have the
6 testimony in front of me right now. Are you aware that there
7 is a transmission upgrade requirement of over \$100 million? I
8 believe it's 110. Are you aware of that?

9 A I'm aware of it. And I will say that --

10 Q If you would, if you would -- that was just a
11 predicate, and let me move forward.

12 A Okay.

13 Q And, and I know this has not been finalized. This is
14 a hypothetical, but I'm asking the question as a hypothetical.

15 If you would assume that that cost is going to be
16 allocated to the applicants and not to the transmission owners,
17 have you done an analysis as to impact of that on your debt
18 service requirements?

19 A As a hypothetical, if, if the, the cost of
20 transmission construction was allocated directly to the
21 applicants and not -- well, no. But the, the way we envision
22 the, the way that the transmission cost and construction is
23 going to occur is that we will have to finance upfront the
24 transmission system. However, JEA will be subscribing to the
25 Progress Energy of Florida transmission system with

1 transmission service fees, and that cost will be credited back
2 to us over the life of that service.

3 Q I understand. I understand. Have you done any kind
4 of analysis that assumes that you're going to have to purchase
5 additional railcars?

6 A This, this is outside of -- I just know there's
7 expert witnesses that can better address that question.

8 Q Very well. Very well. I'll move on.

9 A I can defer you to, you know, Jim Myers and
10 Brad Kushner on different subject matters related to that.

11 Q Thank you. I'll move on.

12 Have you been required to disclose to your lenders
13 and your bonding companies your generation mix?

14 A I'm sorry. Could you ask the question again?

15 Q Have you been required to disclose to your bonding,
16 bond rating companies and to your potential lenders your
17 generation mix?

18 A Our generation mix as it exists today or in the
19 future?

20 Q Actually both, but my primary interest is in the
21 future.

22 A Well, we have full disclosure on our, on our
23 business.

24 Q Okay.

25 A And, yes, we do disclose that. And in the sense that

1 part of our disclosure includes projections of our, of our
2 system mix, yes, we would disclose that.

3 Q And have you seen any impact -- have your bonding
4 companies or your rating companies or your lenders given you
5 any feedback as to your status, your bond status or your
6 lending status after two thousand, I'm sorry, 2012?

7 A Well, the outlook that we present to our bond rate
8 agencies is usually for a ten-year projection. And I believe
9 this last time around we started from 2007 to 2016 and right
10 now we're getting favorable outlook.

11 Q To 2016?

12 A Right. That includes capital expenditures for plants
13 that we talked about earlier that we haven't vetted and haven't
14 made firm decisions to pursue.

15 Q Okay. Now one, one final question. When, when
16 JEA -- and I believe you, you addressed in your testimony, and
17 I'll touch on this very lightly because I know you've already
18 deferred questions regarding DSM and its audit, the
19 administration aspects of it over to other witnesses. But I
20 want to just touch on this one. You were in charge of -- were
21 you the party responsible for rendering to the TEC -- there was
22 a requirement in the application and petition for TEC that each
23 applicant indicate whether or not there were DSM efficiency
24 measures available to offset their requirement for the capacity
25 from TEC. Are you the possible -- the party who was

1 responsible for rendering that conclusion for JEA?

2 A If I -- I really am going to have to apologize. I
3 need to have you ask that question one more time, please.

4 Q As a part of the overall conclusion for Taylor Energy
5 that there were no DSM or cost, or energy efficiency measures
6 available to mitigate the need for the TEC plant, were you the
7 party who was responsible for giving that conclusion on behalf
8 of JEA?

9 A Well, no, in the sense that I don't necessarily have
10 to directly render a conclusion. The analysis that we did in
11 the need for application using the Commission-approved FIRE
12 model and the rate impact measurement test is demonstrated to
13 show that there is no cost-effective measures.

14 Q That was my question. Thank you.

15 A Okay.

16 CHAIRMAN EDGAR: Mr. Jacobs, does that conclude your
17 questioning?

18 MR. JACOBS: Yes.

19 CHAIRMAN EDGAR: Okay. Thank you.

20 Are there questions from staff?

21 MS. BRUBAKER: Staff has just a very few.

22 CHAIRMAN EDGAR: Okay.

23 CROSS EXAMINATION

24 BY MS. BRUBAKER:

25 Q Good morning, Mr. Gilbert.

1 A Good morning.

2 Q If I could just refer you very briefly, please, to
3 the C sections, one of the C sections you sponsor,
4 Page C.8-2. And what appears on that page is two figures, a
5 figure C.8-1 and a C.8-2. The first figure indicates JEA's
6 2006 capacity resource by fuel type. And am I correct that
7 indicates that JEA's coal-fired capacity is 47.3 percent?

8 A The -- yes. Our self-build installed capacity.

9 Q Okay. And looking at 2013, that coal-fired capacity
10 is 50 percent; correct?

11 A That's correct.

12 Q And does that include the TEC unit?

13 A Yes, it does.

14 Q Okay. If I could refer you again just very briefly
15 to, I believe it's Page C.5-13 and the following page C.5-14.
16 Those are figures -- let's see. Those would be Figures
17 C.5-6 and 7. And --

18 A I'm going to have to apologize because I'm not
19 sponsoring those sections. I don't have those sections with
20 me.

21 Q Oh, okay. Okay. Well, perhaps subject to check,
22 would you accept that JEA's expansion plans were modeled both
23 with and without TEC, and whether you're modeling it with TEC
24 or not, they both include two additional coal units to be
25 placed in service after TEC? Are you familiar with that?

1 A Yes, I am.

2 Q Okay. So in short, JEA's coal capacity will be
3 increasing in the future years; is that correct?

4 A Yes. Keeping up with our demand growth, yes.

5 Q Okay. Given what JEA's current coal-fired capacity
6 reliance is, do you believe that it's beneficial for JEA's
7 ratepayers to have this additional coal on JEA's system?

8 A Beyond Taylor Energy Center with those two coal-fired
9 options that are in the plan --

10 Q Uh-huh.

11 A -- we'd have to, you know, we'd have to do, again, a
12 more exhaustive analysis. Once, you know, once we go beyond
13 Taylor Energy Center, once we get Taylor Energy Center approved
14 and we know we're going to construct that, then we would follow
15 up as we get more information over time, as we get closer to
16 the lead time requirements for building those extra, those
17 second and third units, we would determine and vet that
18 decision.

19 Q Okay. And actually that leads into my, my next
20 series of questions. You indicated at your deposition that JEA
21 has approved its participation through certification for TEC;
22 is that correct?

23 A I'm sorry. Could you ask the question again?

24 Q Certainly. JEA has approved its participation in the
25 TEC unit through the certification, through the permitting

1 phase; correct?

2 A Yes, we have done so. Yes, that's correct.

3 Q Okay. And does JEA currently have authority to
4 continue through the construction phase?

5 A Currently our governing board has not given us
6 authority to pursue beyond that.

7 Q Okay.

8 A Nor have we asked them, by the way.

9 Q Okay. So when you reach the construction phase,
10 there will be another opportunity for JEA to evaluate whether
11 it wishes to continue participating in TEC; is that correct?

12 A That's correct. I certainly hope regardless of that
13 we can continue to evaluate it throughout the point until we
14 decide to do the construction, yes.

15 Q And in making that evaluation, what factors would JEA
16 review to determine whether it's in its ratepayers' best
17 interest to continue participation in TEC?

18 A We will look at all factors that have changed
19 significantly or even insignificantly. We'll build a whole
20 other analysis.

21 Q Okay. So would you agree it's prudent for utilities
22 to continuously evaluate whether it's cost-effective to
23 participate in any particular generation plant?

24 A Oh, yes.

25 Q Okay. Is JEA committed to putting in place any

1 additional DSM if programs are found to be cost-effective?

2 A Oh, yes. As a matter of fact, we, we see we have
3 great need going forward and we think there's a place for DSM
4 renewables to meet our clean power goals as well as supply-side
5 projects.

6 Q So that would also include JEA reviewing the
7 availability of additional purchased power opportunities,
8 provided they're cost-effective?

9 A Yes.

10 MS. BRUBAKER: Okay. That's all my questions. Thank
11 you.

12 CHAIRMAN EDGAR: Ms. Raepple.

13 MS. RAEPPLE: Yes, just briefly.

14 REDIRECT EXAMINATION

15 BY MS. RAEPPLE:

16 Q With regard to the pie charts that Mr. Paben asked
17 you to refer to, would you just verify on Page 16 of that
18 excerpt that he gave you the amount of coal? I believe there
19 was a misstatement on the record. And since this document is
20 not in the record, I want it to be clear that the amount of
21 coal in both 2025 and 2030 is shown to be approximately
22 46 percent, not 56 percent; is that correct?

23 A That is correct.

24 Q To the extent JEA's customers are implementing energy
25 efficiency measures, are any resulting savings reflected in

1 JEA's demand forecast?

2 A Yes. The way we do our demand energy forecast is
3 based on actual data. So that would also include actually
4 realized energy savings.

5 Q And with regard to the Figures C.8-1 and C.8-2 --

6 A Yes.

7 Q -- is the expiration of the coal-fired purchased
8 power agreement with Southern reflected in that, in the
9 capacities shown on those charts?

10 A In the 2013 -- in the 2006 chart, the, the sector of
11 that pie chart labeled as purchased power represents our unit
12 power sales with Southern Company, which is coal-fired-based
13 generation. So the total coal in our system in 2006 would be
14 actually 42 -- 52.8 percent. And in 2013 the UPS agreement has
15 expired and so there is no coal purchased power represented.

16 Q And the total coal then in 2013 would be how much?

17 A 50 percent.

18 Q Thank you.

19 A You're welcome.

20 MS. RAEPPLE: I have nothing further.

21 MS. PABEN: Madam Chairperson, just a point of
22 clarification for the record. Applicants' counsel referenced
23 that we had provided and asked questions on that document and
24 that's not accurate.

25 MS. RAEPPLE: I apologize. It was not Mr. Paben. It

1 was Mr. Simms. Thank you for the correction.

2 CHAIRMAN EDGAR: Okay. Thank you for the
3 clarification from both of you.

4 Okay. We need to take up exhibits. I have -- excuse
5 me, Commissioner Carter.

6 COMMISSIONER CARTER: Thank you very kindly. I've
7 heard and I think, I forgot who told me, but JEA has a very
8 aggressive DSM program; correct?

9 THE WITNESS: The clean power program that we talked
10 about in our application is a very aggressive program. If our
11 advisory panel determines to count DSM, then that would be
12 wonderful. But the energy audits and the, the consumer
13 education and the green, green home, Green Built Homes is
14 certainly, I think, very aggressive.

15 COMMISSIONER CARTER: I just wanted to ask that
16 because I think I'd heard that and I think that you guys have
17 been fairly aggressive in the, in the community and you've got
18 a lot of buy-in. I noticed some of the discussion we were
19 having both here today and yesterday, it seems like forever,
20 but anyway is that it really, it really does depend on the
21 person, the individuals, the consumers in terms of how they
22 embrace that. And I think that when you find people doing
23 something positive, you know, you may as well say something
24 about it because you don't hesitate to say something when
25 people are doing things negative. And I think that's a good

1 thing that both, you know, JEA and the City of Tallahassee, as
2 well as some of our other municipals are doing great work in
3 their DSM programs getting customer buy-in.

4 THE WITNESS: We see it as a partnership. I mean,
5 you know, the consumers certainly need to do their part, but we
6 also need to do our part in educating them and supporting them
7 wherever we can.

8 COMMISSIONER CARTER: Thank you, Madam Chairman.

9 CHAIRMAN EDGAR: Thank you. Anything further?

10 Okay. Exhibits.

11 MS. RAEPPLE: Yes. At this time we move Exhibits 16
12 and 17.

13 CHAIRMAN EDGAR: Okay. Seeing no objection, Exhibits
14 16 and 17 will be moved into the record. And the witness can
15 be excused. Thank you.

16 THE WITNESS: Thank you very much, Madam Chairman.

17 (Exhibits 16 and 17 admitted into the record.)

18 CHAIRMAN EDGAR: Let's go ahead and take about ten
19 minutes and then, just to stretch, and then we will come back.
20 And I appreciate all of your forbearance. I do mean ten
21 minutes. And then we will take up the next witness. Thank
22 you. We are on break.

23 (Recess taken.)

24 CHAIRMAN EDGAR: Okay. We're going to go ahead and
25 continue on. And as I said yesterday, for a variety of

1 reasons, one of which is that some of us are hungry, we will
2 aim to take a lunch break around 12:45ish depending on kind of
3 what the breaking point is right around then. And I'm ready
4 for you to call your next witness.

5 MR. PERKO: Nicholas Guarriello.

6 NICHOLAS GUARRIELLO

7 was called as a witness on behalf of the Florida Municipal
8 Power Agency, JEA, Reedy Creek Improvement District and the
9 City of Tallahassee and, having been duly sworn, testified as
10 follows:

11 DIRECT EXAMINATION

12 BY MR. PERKO:

13 Q Could you please state your name and business address
14 for the record?

15 A My name is Nicholas Guarriello, G-U-A-R-R-I-E-L-L-O.
16 My business address is 1000 Legion Place, Suite 1100, Orlando,
17 Florida 32801.

18 Q Have you been sworn, sir?

19 A Yes, I have.

20 Q And did you prefile direct testimony in this
21 proceeding consisting of 13 pages on September 19th, 2006?

22 A Yes, I did.

23 Q Do you have any changes or additions to that
24 testimony?

25 A No changes.

1 Q Are you sponsoring any sections of the application
2 that has been identified as Exhibit 3 in this proceeding?

3 A I'm sponsoring --

4 Q I'm sorry. Exhibit 18.

5 A I'm sponsoring D, Section D, the sections of that
6 that are mentioned in my testimony.

7 Q Do you have any changes or additions to those
8 sections?

9 A No, I do not.

10 MR. PERKO: Madam Chairman, I'd ask that
11 Mr. Guarriello's testimony be entered into the record as though
12 read.

13 CHAIRMAN EDGAR: The prefiled testimony will be
14 entered into the record as though read.

15

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1 BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

2 DIRECT TESTIMONY OF NICHOLAS GUARRIELLO

3 ON BEHALF OF

4 REEDY CREEK IMPROVEMENT DISTRICT

5 DOCKET NO. _____

6 SEPTEMBER 19, 2006

7

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

9 A. My name is Nicholas Guarriello. My business address is 1000 Legion Place,
10 Suite 1100, Orlando, Florida 32801.

11

12 **Q. By whom are you employed and in what capacity?**

13 A. I am employed by R.W. Beck. My current position is Principal and Immediate
14 Past President/CEO.

15

16 **Q. Please describe R.W. Beck.**

17 A. R.W. Beck is a national management consulting and engineering firm with a
18 multidisciplined staff of 550 and 25 offices nationwide. R.W. Beck provides a
19 variety of consulting and engineering services across several industries,
20 including energy, water, and solid waste. For the energy industry, R.W. Beck
21 provides power supply analysis, assistance with requests for proposals (RFPs);
22 independent engineering reviews and financial feasibility assessments; appraisal
23 evaluations; due diligence reviews; transmission and distribution design
24 services; construction management; planning and owner's engineering services

1 for generation and transmission facilities; preparation of environmental reports;
2 and monitoring, permitting, and licensing. Since its founding in 1942, some of
3 the milestones that the firm has achieved include the following:

- 4 • Providing independent engineering and feasibility assessments
5 associated with more than \$150 billion in capital investment.
- 6 • Performance of due diligence reviews and/or design and
7 engineering of more than 400 power-related projects.

8
9 **Q. Please state your educational background and experience.**

10 A. I received a Bachelor of Science degree in Electrical Engineering from the
11 Polytechnic University. I have a Master of Business Administration from New
12 York University. I am also a registered Professional Engineer in the State of
13 Florida.

14
15 I have more than 30 years of experience in the electric, gas, solid waste, water,
16 and wastewater industries. My experience includes financings, appraisals, retail
17 rate studies, wholesale rate work, power supply planning, load forecasting,
18 consulting engineer's reports for bond financing, contract analyses and
19 negotiations, annual and biennial reports required by bond resolutions, and
20 expert testimony and litigation support. I also have significant experience in
21 strategic and long-term planning for electric utility clients. I have been involved
22 in several internal task forces and external presentations addressing the
23 competitive and restructuring issues facing the utility industry in the United

1 States, including transmission access, deregulation, technological improvements,
2 and retail wheeling.

3

4 I have been involved in providing expert assistance or testimony regarding open
5 access transmission filings in light of a changing utility environment and
6 increased competition.

7

8 In addition, more recently, I have made several presentations regarding the
9 renewed interest in coal generation and the future of the electric power industry.

10 I have been staying abreast on utility trends impacting the industry and, over the
11 years, have spoken at several executive forums on the resurgence of coal fired
12 generation in the power industry and have researched this trend and its impact
13 on the industry.

14

15 **Q. What is the purpose of your testimony in this proceeding?**

16 A. The purpose of my testimony is to provide an overview of Reedy Creek
17 Improvement District (RCID) and its participation in the Taylor Energy Center
18 (TEC). I will summarize RCID's existing generating system as well as its
19 available purchase power resources. I will also discuss RCID's load forecast
20 and its need for capacity. I will provide an overview of the demand-side
21 management (DSM) and conservation programs currently offered by RCID, as
22 well as RCID's ongoing commitment to evaluate new conservation
23 opportunities. In addition, I will discuss strategic considerations that support

1 RCID's decision to participate in TEC, and RCID's ability to finance its
2 ownership share of the TEC project.

3

4 **Q. Are you sponsoring any sections of Exhibit ___[TEC-1], the Taylor Energy
5 Center Need for Power Application?**

6 A. Yes. I am sponsoring Sections D.1.0, D.2.0, D.3.0, D.4.0, D.7.0, D.8.0, and
7 D.10.0, all of which were prepared under my direct supervision.

8

9 **Q. Please provide a summary of RCID's existing electric utility system.**

10 A. RCID owns, operates, and maintains facilities associated with the electric
11 generation and distribution of power solely within RCID. The current net
12 summer generating capacity totals 60 MW.

13

14 RCID's Central Energy Plant (CEP) consists of a 1x1 combined cycle unit
15 utilizing a General Electric (GE) LM6000 combustion turbine, with a net
16 summer output of 55 MW. In addition to the CEP site, the Epcot Central
17 Energy Plant (ECEP) consists of two packaged diesel generating units to
18 provide peaking and emergency backup service to vital loads. Each diesel unit
19 has a maximum permitted capacity limit of 2.5 MW.

20

21 RCID currently meets a major portion its electric system requirements through
22 power purchases from Tampa Electric Company (TECO), Progress Energy
23 Florida (PEF), and Orlando Cogen Limited (OCL). Table D.2-1 of Exhibit ___
24 [TEC-1] summarizes these purchase power contracts.

1

2 **Q. Please briefly describe the methodology used in developing RCID's load**
3 **forecast.**

4 A. RCID's primary customer is the Walt Disney Resort Complex (WDW), which
5 represents approximately 85 percent of its load. The remaining 15 percent of
6 RCID's load is primarily from commercial customers consisting of hotels and
7 service businesses and approximately 10 residential customers. As such, load
8 forecasts for RCID are generally driven by its customers' baseload business
9 models. RCID's load growth is forecast to occur in increments due to new
10 facilities developed as part of its customers' business models.

11

12 For each forecast, the initial year values are established based on the previous
13 year's actual loads, adjusted for anomalies and any known incremental additions
14 or subtractions. While the types and locations of future development within
15 RCID's boundaries have been defined, the timing of these developments is not
16 known with certainty. As a result, the forecast is essentially a straight-line
17 approximation of the growth rate.

18

19 **Q. Please discuss the results of RCID's base case load forecast.**

20 A. Incremental annual additions for the RCID load forecast range between 1 MW
21 and 3 MW over the 2006 to 2010 time frame. Incremental additions beyond
22 2010 are based on the average additions of approximately 1 MW per year
23 through 2025. The firm summer peak demand is projected to increase from
24 191 MW in 2006 to 213 MW in 2025 (an average annual growth rate of

1 approximately 0.6 percent). RCID's annual energy requirements are expected to
2 increase from 1,259 GWh in 2006 to 1,395 GWh in 2025 (an average annual
3 growth rate of approximately 0.5 percent). Table D.3-1 of Exhibit __[TEC-1]
4 summarizes RCID's net annual peak demand and energy requirements for the
5 years 2006 through 2025.

6

7 **Q. Were any alternative load forecasts developed?**

8 A. Yes. High and low load forecasts were developed.

9

10 **Q. Please discuss the results of RCID's high load forecast.**

11 A. RCID's high load forecast reflects that summer peak demand is projected to
12 grow at an average annual rate of approximately 0.7 percent over the 2006
13 through 2025 period (from 195 MW to 223 MW). Annual energy requirements
14 are projected to increase at an average annual rate of approximately 0.7 percent
15 over the 2006 through 2025 period (from 1,279 GWh to 1,468 GWh).

16

17 **Q. Please discuss the results of RCID's low load forecast.**

18 A. RCID's low load forecast reflects that summer peak demand is projected to
19 grow at an average annual rate of approximately 0.3 percent over the 2006
20 through 2025 period (from 190 MW to 203 MW). Annual energy requirements
21 are projected to increase at an average annual rate of approximately 0.4 percent
22 over the 2006 through 2025 period (from 1,246 GWh to 1,336 GWh).

23

24

1 **Q. In your opinion is the process used for developing the demand and energy**
2 **forecasts reasonable for planning purposes?**

3 A. Yes. The process used in developing the demand and energy forecasts is
4 appropriate for planning purposes.
5

6 **Q. What reserve margin does RCID use for planning purposes?**

7 A. RCID plans to maintain a 15 percent reserve margin for planning purposes.
8

9 **Q. Please describe RCID's expected need for additional capacity to satisfy**
10 **reserve margin requirements under the base case load forecast.**

11 A. RCID is expected to encounter a capacity shortfall in 2011, taking into account
12 load growth and the expiration of the PEF purchased power contract, at which
13 time approximately 134 MW of additional capacity will be required to maintain
14 a 15 percent reserve margin. The need for additional capacity increases to
15 approximately 185 MW by 2025. Table D.4-1 of Exhibit __[TEC-1]
16 summarizes RCID's forecast annual capacity requirements for the years 2006
17 through 2025.
18

19 **Q. Please discuss RCID's existing DSM and conservation programs.**

20 A. Throughout its history, RCID has demonstrated a strong commitment to
21 conservation. RCID has assisted and participated in numerous conservation and
22 efficiency programs. A vast majority of the DSM and conservation activities
23 within the RCID service territory have been implemented for and/or by WDW.
24

1 The DSM and conservation programs assisted with or provided by RCID, in
2 conjunction with its customers, include the following:

- 3 • Customer implemented DSM and conservation programs.
- 4 • Energy Efficient Lighting Solutions – Green Lights Program.
- 5 • Thermal Storage Facility/Program.

6

7 **Q. Are the impacts of DSM and conservation reflected in the load forecast for**
8 **RCID?**

9 A. Yes. The load forecast for RCID reflects the DSM and conservation measures
10 already implemented by RCID and its customers.

11

12 **Q. Does RCID plan to consider any new DSM and conservation programs in**
13 **the future?**

14 A. Yes. RCID and its customers will continually evaluate opportunities for energy
15 conservation. As new facilities are built, by the RCID or its customers,
16 consideration will be given to the application of existing energy conservation
17 programs to those new facilities, and any appropriate new DSM options will be
18 evaluated for the new facilities.

19

20 **Q. Are there any advantages that the installation of TEC will have on fuel**
21 **diversity?**

22 A. Yes. RCID's existing generation is fueled by natural gas and diesel fuel, with a
23 majority of its demand and energy requirements met through purchase power
24 agreements with TECO, PEF, and OCL. These purchase power agreements

1 provide RCID with power from a diverse mix of resources and fuel types.
2 Based on available summer capacity and including purchased power broken
3 down by generation fuel types for TECO and PEF, RCID currently meets its
4 capacity needs through nuclear resources (4 percent), coal fired resources
5 (16 percent), natural gas fired resources (63 percent), and oil fired resources
6 (17 percent). Under the least-cost expansion plan, by 2011, RCID will become
7 primarily dependent on natural gas fired resources at 84 percent of its total
8 available capacity. Of the remainder, coal fired resources represent 13 percent
9 and oil fired resources provide the remaining 3 percent.

10

11 This change in capacity resources is primarily driven by the expiration of the
12 PEF agreement and the addition of a new LM6000 combined cycle resource in
13 that year. With the inclusion of TEC in 2012, RCID's available capacity under
14 the least-cost expansion plan would shift back to a more diverse fuel mix. Coal
15 fired resources would increase to 32 percent of total available capacity, gas fired
16 resources would decrease to 65 percent, and oil fired resources would represent
17 the remaining 3 percent. Therefore, the low cost baseload energy from TEC will
18 help RCID reduce its dependence on volatile, higher cost energy from natural
19 gas and oil.

20

21 In addition, the project will have the ability to source solid fuels from both
22 domestic and international coal producing regions, as well as petroleum coke
23 (petcoke) from the Gulf Coast region and the Caribbean. Historically, the
24 regions from which these coals and petcoke will be sourced have experienced

1 less fluctuation in price and generally have had lower commodity prices than oil
2 and natural gas on a \$/MBtu basis. As a result, TEC will not only provide solid
3 fuel diversity for RCID, but it will also provide further fuel diversification
4 through the capability to source coal and petcoke from numerous different
5 regions, which will help mitigate exposure to high natural gas and fuel oil
6 prices.

7

8 **Q. Are there any advantages that the installation of TEC will have on fuel**
9 **reliability?**

10 A. Yes. The addition of solid-fueled generation increases the reliability of RCID's
11 fuel supply. A coal and petcoke inventory for up to approximately 90 days of
12 operation can be stored onsite, reducing the potential supply disruptions
13 associated with natural gas like those resulting from hurricanes in the Gulf
14 Coast. Furthermore, the ability to store up to approximately 90 days of fuel
15 mitigates potential transportation disruption.

16

17 **Q. Are there any advantages that the installation of TEC will have on the**
18 **stability of RCID's electric rates?**

19 A. Yes. TEC will help to satisfy the need for low cost, baseload energy within
20 RCID's service territory. Additional low cost, baseload energy from TEC will
21 help stabilize volatility in electric rates for consumers and businesses. Electric
22 rate stability will be beneficial for long-term planning.

23

1 **Q. Will the economic advantages of TEC end after 2035?**

2 A. No. Although economic evaluations have been conducted through 2035 for this
3 Taylor Energy Center Need for Power Application (Exhibit __ [TEC-1]), TEC
4 will be designed for, and is expected to have, a service life significantly greater
5 than the 23 years of operation captured by the analysis period. The benefits of
6 TEC's expected actual service life of 35 to 50 or more years have not been
7 captured in the economic analysis, but are expected to be realized by RCID and
8 the other project Participants. Therefore, the total cost savings and benefits of
9 TEC are understated in the economic analysis.

10

11 **Q. Are there any advantages that the installation of TEC will have on
12 geographic diversity?**

13 A. Yes. For RCID, the other project participants, and the State of Florida as a
14 whole, TEC will provide geographic diversity because it will be constructed on
15 a greenfield site. The greenfield site provides RCID with baseload generation
16 without increasing the concentration of its generation resources at one location
17 or within its service territory. This diversity should increase the reliability and
18 availability of generating resources, particularly if a hurricane or other extreme
19 condition causes forced outages in a localized area.

20

21 **Q. How will participation in TEC affect RCID's portfolio of generating
22 resources?**

23 A. RCID currently purchases approximately 80 percent of its capacity requirements
24 through agreements with TECO, PEF, and OCL. Participation in TEC will

1 provide RCID with additional low cost, baseload generating capability and will
2 reduce its dependence on potentially higher cost capacity and energy from
3 power purchases in the volatile electric energy market in the future.
4

5 **Q. Are there other important factors that RCID considered in its decision to**
6 **participate in TEC?**

7 A. Yes. As discussed in the testimony of Paul Hoornaert, TEC will utilize proven
8 supercritical technology and include the Best Available Control Technology to
9 minimize plant emissions. It was important to RCID that TEC utilize proven
10 and reliable technology and also minimize impacts to the environment.
11

12 **Q. How does RCID intend to finance its participation in the construction of**
13 **TEC?**

14 A. RCID has not yet made a firm decision in regard to funding for its participation
15 in TEC. RCID may draw on its working capital to fund its participation in the
16 TEC project during the preliminary design, engineering, and permitting phases.
17 RCID will likely obtain financing through a fixed or floating rate long-term
18 revenue bond to fund its participation in the TEC project as construction begins.
19 RCID's current bond rating is A- from Fitch and Standard & Poor's, and A3
20 from Moody's.
21
22
23

1 Q. Will RCID be able to obtain the financing for its participation in the
2 construction of TEC?

3 A. Yes. Based on RCID's bond ratings and reputation, RCID will be able to obtain
4 financing for its ownership share of TEC.

5

6 Q. Does this conclude your testimony?

7 A. Yes.

1 BY MR. PERKO:

2 Q Mr. Guarriello, have you prepared a summary of your
3 testimony?

4 A Yes, I have.

5 Q Could you please provide that now?

6 A Yes. The purpose of my testimony is to provide an
7 overview of the Reedy Creek Improvement District and its
8 participation in the Taylor Energy Center.

9 Reedy Creek owns, operates and maintains facilities
10 associated with electric generation of approximately
11 60 megawatts, and they distribute power supply within their
12 service boundaries. Reedy Creek currently purchases a majority
13 of their needs through purchased power. Reedy Creek's primary
14 customer is the Walt Disney World Resort complex, which makes
15 up to 85 percent of its loads. The remaining 15 percent of the
16 load is hotels and service businesses, with just about ten
17 residential customers.

18 Reedy Creek's load increases in increments due to the
19 installation of new facilities developed as part of its
20 customers' business models. Reedy Creek is expected to
21 encounter a capacity shortfall in 2011 taking into account load
22 growth and the expiration of a purchased power contract, at
23 which time approximately 134 megawatts of additional capacity
24 will be needed to maintain a 15 percent reserve margin.

25 Throughout its history Reedy Creek has demonstrated a

1 strong commitment to conservation. It has assisted and
2 participated in numerous conservation and efficiency programs.
3 A vast majority of the DSM and conservation activities within
4 its service territory have been implemented for and/or by
5 Walt Disney World.

6 The load forecast presented herein for Reedy Creek
7 reflects DSM and conservation measures already implemented by
8 Reedy Creek and its customers. In addition, they will
9 continually evaluate opportunities for further energy
10 conservation.

11 The Taylor Energy Center will provide a unique
12 opportunity for Reedy Creek to increase fuel diversity, provide
13 geographic diversity in its generating resources, and help
14 stabilize volatility in electric rates for customers and
15 businesses. That concludes my summary.

16 MR. PERKO: We tender Mr. Guarriello for
17 cross-examination.

18 CHAIRMAN EDGAR: Thank you.

19 MS. BROWNLESS: Yes, ma'am.

20 CHAIRMAN EDGAR: Ms. Brownless.

21 CROSS EXAMINATION

22 BY MS. BROWNLESS:

23 Q Good morning, Mr. Guarriello.

24 A Good morning.

25 Q For the past last five years what is the annual

1 electric demand growth rate for Reedy Creek?

2 A The demand rate, I just happened to be looking at it,
3 at least for the last eight years it's been about 1 percent.

4 Q Okay. Do you know for the last five years?

5 A No, not at this time.

6 Q Did Reedy Creek issue any requests for proposals for
7 purchased power to meet its 2011 need other than the one that
8 was sent as part of this TEC need application?

9 A No, they did not.

10 Q Do you believe that the purchased power market in
11 Florida is very tight at this time with regard to baseload
12 capacity?

13 A I would say it's tight at this time, yes.

14 Q In the current market would you expect that Reedy
15 Creek, along with other participants, would be able to sell any
16 capacity that they don't use themselves on the Florida market?

17 A If they had excess capacity, right now there would
18 probably be a market for it.

19 Q Okay. And do you believe that the market would
20 support a premium price for that capacity? And by premium
21 price, I mean at a price slightly lower than intermediate
22 combined cycle capacity.

23 A Well, if you're talking about capacity, not energy,
24 that's more so a monthly or six-month or an annual basis. And
25 it depends, like I said, it depends on the market and who needs

1 additional capacity. There would be some kind of premium on
2 it. I don't know how much.

3 Q Okay. And with regard to energy would your answer be
4 the same?

5 A With regard to energy, since that's sold on an hourly
6 basis, there is a methodology for doing that in the
7 State of Florida and that usually has some premium on it.

8 Q Okay. As I understand your testimony, Walt Disney
9 instituted its own conservation programs; is that correct?

10 A I believe what I said in my testimony was that
11 Reedy Creek either with Walt Disney World or sometimes, yes,
12 Walt Disney World does institute some of their own demand-side
13 and energy conservation programs, but Reedy Creek works very
14 closely with its customers, including Walt Disney World and the
15 hotels, and they actually have a chief senior energy management
16 engineer that works with their customers.

17 Q Okay. But the bottom line is that it's
18 Walt Disney World who decides which demand-side management
19 programs Walt Disney World will institute; is that right?

20 A Since Walt Disney World is a majority customer,
21 85 percent, and a major customer, of course -- and I always
22 have to remember that Reedy Creek is a very unique utility
23 having 85 percent of its customers being one customer, a
24 Fortune 500 customer at that. Walt Disney World does institute
25 some of its own conservation measures as a customer, yes.

1 Q And Walt Disney World uses its own test to determine
2 the cost-effectiveness of those demand-side management
3 programs; right?

4 A That is correct.

5 Q Okay. Are you aware of the actual cost-effectiveness
6 test Walt Disney World uses to evaluate the demand-side
7 management programs it institutes?

8 A They look at the cost versus the benefits. They look
9 at the benefits over the costs, and they evaluate those
10 benefits typically on energy savings that they don't have to
11 pay for the energy and capacity on their electric bill versus
12 the cost, including total cost.

13 Q Okay. And do you know how that compares to the
14 cost-effectiveness test used by Mr. Kushner here, which is the
15 RIM test?

16 A My understanding, the RIM test is looking at benefits
17 versus cost. And if the benefits outweigh the cost or equal or
18 outweigh the cost --

19 Q Isn't the RIM test a rate impact test?

20 A The RIM is a rate impact test. The FIRE model has
21 three different tests.

22 Q Exactly. But you're not aware of whether
23 Walt Disney World actually uses a FIRE model to decide which
24 demand-side management program it implements, are you?

25 A I'm not aware of it.

1 Q You indicated in your, at your deposition that
2 Walt Disney World was tied into Reedy Creek's energy management
3 system; is that right?

4 A Yes, they are.

5 Q Okay. And if I'm misstating your deposition
6 testimony, please correct me. My understanding is that allows
7 Reedy Creek to control certain equipment to meet agreed set
8 points in Walt Disney's system; is that right?

9 A In a little more detail, yes. They get together and
10 set the points like the temperature that they would not go
11 below, et cetera, and then the energy management system is run
12 by Reedy Creek Improvement District to those set points or
13 whatever the agreement is.

14 Q Okay. And with regard to the type of equipment one
15 might be controlling in Walt Disney World, that might be
16 air-conditioning thermostats, for example, or heating?

17 A That is a good example.

18 Q Okay. But those set points are mutually agreed upon
19 by Reedy Creek and Walt Disney; right?

20 A Yes.

21 Q Okay. My understanding is that the commercial hotels
22 also do their own conservation programs; is that right?

23 A Again, with assistance or input from Reedy Creek, and
24 they have a monthly meeting where all the customers are invited
25 to discuss it. Reedy Creek supplies them with information,

1 Reedy Creek provides energy audits, and the customers, of
2 course, make decisions on what they will or will not do.

3 Q And based upon the information that they're provided
4 and possibly other outside energy consultants that they might
5 have access to they make their own decisions as to which
6 demand-side management programs are cost-effective; is that
7 right?

8 A As far as their own facilities. Reedy Creek --

9 Q Yes. As far as their own facilities.

10 A Reedy Creek has some facilities, their own facilities
11 too that they have put in demand-side management conservation
12 measures and energy efficient programs with, yes.

13 Q And I'm just talking about the hotels now. They make
14 their own decisions about which demand-side management measures
15 they'll implement within their own hotel.

16 A I believe the first question you said Walt Disney
17 World, but the same would apply to hotels.

18 Q Okay. And, again, do you have any idea whether they
19 use the FIRE model or the equivalent of the FIRE model to make
20 those demand-side management decisions?

21 A Again, I would say that they're looking at the cost
22 versus the benefits either to the customer or what they would
23 save versus the cost of it, and that's the approach. If
24 they're cost-effective, they will implement them. And they've
25 been very successful, Walt Disney World, the other customers,

1 and Reedy Creek, to the point where currently I have in my
2 testimony that they are saving 100 gigawatt hours annually,
3 which is about 8 percent of their energy, which is a very
4 aggressive, very, a lot of energy saved, and that translates
5 probably to about 10 percent of their demand.

6 And just as a point of reference, Florida Power &
7 Light here in this state, which is the largest investor-owned
8 utility, has said that they feel they're first in the nation in
9 demand savings for conservation and DSM, save about 4 percent
10 on energy and 11 or 12 percent on demand depending on if you're
11 looking at winter or summer, and Reedy Creek and its customers
12 together are saving about 8 percent of the energy and about
13 10 percent of their demand.

14 Q And I appreciate that answer. However, my question
15 is very specific, and that is do you know whether the hotels,
16 in determining which demand-side management programs they will
17 implement within their own hotel, use the equivalent of a FIRE
18 model? Yes or no.

19 A In my opinion, yes, equivalent because they look at
20 cost versus benefits.

21 Q Okay.

22 A If the benefits --

23 Q But you don't know whether they actually use the FIRE
24 model.

25 A I do not know.

1 Q Reedy Creek has one conservation program that's
2 administered by Reedy Creek; is that correct? And that's your
3 thermal storage program that you discussed in your Late-Filed
4 Exhibit 1.

5 A They have more than one. That's one of them. They
6 have lighting programs. They are part of the Green Lights
7 program. They look at motors and other things in their
8 buildings. They own buildings.

9 Q We'd like to hand out Late-Filed Exhibit 1, which is,
10 which you provided us at your deposition. And can you look at
11 what you've been provided and see if that is a true and correct
12 copy of the late-filed exhibit you gave us?

13 MS. BRUBAKER: Madam Chairman?

14 CHAIRMAN EDGAR: Yes, Ms. Brubaker.

15 MS. BRUBAKER: Whether the document actually gets
16 moved into the record or not, can we ask that to the extent
17 documents are provided and identified, that they be identified
18 on the record?

19 MS. BROWNLESS: We're getting ready to do that, or
20 I'm trying to do that.

21 MS. BRUBAKER: Okay. Thank you.

22 MS. BROWNLESS: And we'd like that this be given a
23 number, Your Honor.

24 CHAIRMAN EDGAR: Okay. We will number it as Number
25 104. And, Ms. Brownless, a title, please.

1 MS. BROWNLESS: It's the Reedy Creek Improvement
2 District Chiller 7 and 8 Replacement Analysis, I guess I'll
3 say.

4 CHAIRMAN EDGAR: Thank you.

5 MS. BROWNLESS: Yes, ma'am.

6 (Exhibit 104 marked for identification.)

7 BY MS. BROWNLESS:

8 Q If I look on Pages 10 and 12 of this analysis,
9 Mr. Guarriello, it appears to me that Reedy Creek cogeneration
10 unit was markedly cheaper than contract and market-quoted
11 capacity and energy costs; is that correct?

12 A You have to bear with me. I don't find a Page 10 or
13 12. Oh, I see, at the top of the page. The bottom, they're
14 numbered differently.

15 Q I'm sorry.

16 A Okay. I found Page 10 of 12. Could you repeat the
17 question, please?

18 Q And the question is looking at this page it seems
19 that the analysis shows that Reedy Creek's cogeneration unit
20 was markedly cheaper than contract and market-quoted capacity
21 and energy costs; is that right?

22 A I believe that what this is showing is that if they
23 would go ahead -- this was when they were looking at going
24 ahead with the thermal storage facility -- that one of the
25 benefits they would get was through inlet cooling they would be

1 able to get more capacity out of their combined cycle unit.
2 And the cost of making the change to a thermal storage
3 facility, which had several things that would come with it, but
4 one of it would be inlet cooling, that that cost, the \$1.45 a
5 kilowatt month, for example, on the inlet cooling was lower
6 than the associated cost of the capacity we were purchasing at
7 that time.

8 Q Okay. And so this was the basis for the financial
9 support for spending the money on the thermal storage unit
10 because it enhanced the efficiency and lowered the cost of the
11 cogen unit.

12 A It was -- I'm sorry. It was one of the benefits. If
13 you look at Page 7 of 12, that shows the different alternatives
14 they looked at and the different benefits. And there were
15 three benefits, shifting peak, shift in energy from onpeak to
16 offpeak so they could store the water, chilled water at night
17 and then use it during the day instead of having to run those
18 chillers during the day, there was the inlet cooling, which was
19 used to increase the capacity of the combined cycle unit, and
20 they also add an external contoured combustor, which also
21 increased capacity. So there's three benefits. And those
22 together showed that the benefits were more than the cost of
23 making this change.

24 Q Thank you. Now did Reedy Creek explore the expansion
25 of its cogeneration facility or other cogeneration

1 opportunities in lieu of participation in PC in this project?

2 A I'm not testifying to the economics, but I've read
3 the sections and they -- part of the least-cost expansion plan
4 is they are going to add some of their own generation. But
5 they have a 134-megawatt deficiency and they looked at a
6 combination of things that made it the least cost, and that
7 included the Taylor Energy Center.

8 Q Okay. And I guess my question is very specific. As
9 part of the supply-side options or self-build options for TEC,
10 did they include expanding their cogeneration opportunities?

11 A It was included in the least-cost expansion plan,
12 yes.

13 Q Okay. The analysis that was done by Reedy Creek to
14 support its case for including the thermal storage unit is not
15 the RIM test; is that correct?

16 A That is correct. It's the cost versus benefits.

17 Q As I understand it, Mr. Kushner analyzed Reedy
18 Creek's demand-side management and determined that none was
19 cost-effective; is that right?

20 A I'm not sure that's right. I mean, everything
21 they've done, as I said, which is a significant amount of
22 efficiency programs, conservation, DSM, showed to be
23 cost-effective.

24 I think all Mr. Kushner said was that there are no
25 other at this time demand-side management conservation that he

1 could see could be done. I'm not sure. You'd have to ask
2 Mr. Kushner if he evaluated everything.

3 Q Okay. Do you know whether the programs that were
4 analyzed by Mr. Kushner on behalf of Reedy Creek are actually
5 being implemented by Walt Disney?

6 A I guess you'd have to ask Mr. Kushner first what he
7 analyzed. I'm not aware of what he analyzed. But one of the
8 things I looked at was there's a long list in FMPA's and JEA's
9 sections -- I'm familiar with one in FMPA that has 180 or a
10 whole list of different conservation and energy efficiency
11 programs, and Walt Disney and Reedy Creek have done a
12 significant amount of those already.

13 Q Okay. And I guess what I'm asking of you is did you
14 do an analysis that compared the demand-side management
15 programs actually being implemented by Walt Disney compared to
16 the list that Mr. Kushner analyzed?

17 A I looked at it and I could see that there's a whole
18 bunch on that list that Walt Disney has already implemented.

19 Q Okay. But you don't know specifically how many or
20 which ones?

21 A Not specifically.

22 Q Okay. Is that also true for the commercial customers
23 in Reedy Creek's district?

24 A Same thing. They have looked at and have, currently
25 are doing many, many of those things on that list.

1 Q Okay. But you don't know specifically which ones
2 they are doing?

3 A I know if you could look in Section 7, they have the
4 Green Lights program. So any of the lighting things they've
5 done, replacing lighting, they've done that. They've optimized
6 like their air system controls, the HVAC, the motors, they've
7 done a lot of those type of things. But to get very specific
8 one by one, I have not done that.

9 MS. BROWNLESS: Okay. Thank you very much. And I
10 guess is this the time where we ask that Mr. Kushner's exhibit
11 be moved or do we wait?

12 CHAIRMAN EDGAR: My preference is let's take it up at
13 the end of his testimony.

14 Mr. Paben.

15 MR. PABEN: No further questions.

16 CHAIRMAN EDGAR: No questions.

17 Mr. Jacobs.

18 MR. JACOBS: No questions.

19 CHAIRMAN EDGAR: Questions from staff?

20 MS. FLEMING: Just a few brief questions.

21 Good morning, Mr. Guarriello. How are you?

22 THE WITNESS: Good morning.

23 MR. JACOBS: Excuse me. I'm sorry. Madam Chair, I'm
24 sorry. Can I ask just one question? I had forgotten.

25 CHAIRMAN EDGAR: All right. Generally I do not come

1 back, but in this instance, knowing that we are all trying to
2 work together and that it's limited, yes, yes, I will.

3 MR. JACOBS: I'll be very brief. Thank you.

4 CROSS EXAMINATION

5 BY MR. JACOBS:

6 Q Good morning.

7 A Good morning.

8 Q In line with the questions you've had already, have
9 you done any identification and analysis of industrial
10 potential DSM applications in your customer base?

11 A It depends on what you classify Walt Disney World as.
12 If you're calling it industrial, it's an entertainment complex,
13 commercial industrial. Walt Disney World has done a lot of
14 analysis and Reedy Creek, but I have not for that customer.

15 MR. JACOBS: All right. Thank you.

16 CHAIRMAN EDGAR: Thank you.

17 Ms. Fleming.

18 CROSS EXAMINATION

19 BY MS. FLEMING:

20 Q You stated in your deposition that Reedy Creek is
21 currently relying heavily on purchased power to meet its
22 current load.

23 A That's right.

24 Q Is it fair to say that by participating in the Taylor
25 Energy Center, Reedy Creek is going to meet the majority of its

1 load through its own generation capacity rather than relying on
2 purchased power?

3 A It will reduce its amount of purchased power, as you
4 can see in the filing. It would still have a purchased power
5 agreement with OCL for 35 megawatts and one with TECO for 75,
6 up to 75 megawatts. So it would still have, if it used all
7 that purchased power, half of that load at that time, but it'll
8 be supplemented now with coal power from TEC and their own gas
9 generation.

10 Q Is there a benefit to Reedy Creek associated with
11 replacing purchased power with generation?

12 A I guess there's a couple of benefits. There's fuel
13 diversity, there's long-term purchased power. All their
14 purchased power agreements are short-term, and you should have
15 in your mix some long-term generation like their own
16 generation. Now they'll have some in coal. It gives them the
17 fuel diversity and it gives them geographic diversity.

18 Q Is there a reliability benefit to that?

19 A Well, the reliability benefit is it spreads out the
20 risk of any one -- I mean, if you have a hundred and something
21 megawatts of purchased power from one entity, there's more of a
22 risk, and it's best to spread it out over several purchases or
23 generation, et cetera.

24 Q Now what is Reedy Creek doing to review the
25 availability of additional cost-effective purchased power

1 opportunities on a continuing basis?

2 A They do their own internal power supply analysis
3 about once a year. And they are continuously talking to
4 others, what's available. Mainly purchased power these days
5 are in short-term. You don't get too many long-term purchased
6 power contracts. But they are continually talking to their
7 neighboring utilities to see what might be available when a
8 deficiency occurs.

9 Q Now you stated in your witness summary that
10 Reedy Creek will be, will encounter a capacity shortfall of
11 approximately 134 megawatts beginning in 2011 or 2011. Is it
12 probable that this capacity shortfall -- that Reedy Creek could
13 meet its capacity shortfall with additional DSM?

14 A As I mentioned, I think this is the right answer.
15 They currently are meeting 8 percent of their energy needs and
16 10 or 11 percent of their capacity needs through their
17 conservation programs, which is very significant. To go much
18 further than that -- but they have -- I just found out recently
19 that Walt Disney World has just instituted in this new fiscal
20 year what they're calling a strive for five to try to reduce
21 their energy take over the next five years by another
22 5 percent. But even that, which would be very aggressive, and
23 they would have about 13 percent of energy savings, it's very,
24 very aggressive, that 5 percent would only mean another 5 to
25 7 megawatts and their shortfall is 134 megawatts.

1 Q Is Reedy Creek committed to putting in place
2 additional DSM if those programs are found to be
3 cost-effective?

4 A They are very committed to do that and so is their
5 customers.

6 Q Now we've heard that Reedy Creek has approval for
7 participation in TEC through the permitting phase but not yet
8 the construction phase. Does that mean that Reedy Creek will
9 have another opportunity to determine whether it wants to
10 participate in the Taylor Energy Center?

11 A Yes, just like all the other participants.

12 Q And at that point what factors will Reedy Creek look
13 at to determine if it's still in the ratepayers' best interest
14 to participate in Taylor Energy?

15 A They'll consider any new information that's available
16 related to TEC, relating to the other options they have, and
17 the staff would review that and then make a recommendation to
18 the board of directors of Reedy Creek Improvement District.

19 Q Would you agree that it is prudent for utilities to
20 continuously evaluate whether participating in a particular
21 generation plant continues to be cost-effective?

22 A Yes, until the point that it's built.

23 MS. FLEMING: We have no further questions.

24 MR. PERKO: Very briefly, Madam Chair.

25 REDIRECT EXAMINATION

1 BY MR. PERKO:

2 Q Mr. Guarriello, Ms. Brownless asked you a question
3 regarding whether Reedy Creek's customers make their own
4 decisions on whether or not to participate in DSM measures. Do
5 you recall that?

6 A Yes.

7 Q Don't all customers of any utility make their own
8 decisions on whether or not to participate in DSM measures?

9 A Yes, they do. I mean they might be presented with
10 some by the utility, but they make the final decision.

11 MR. PERKO: Nothing further.

12 CHAIRMAN EDGAR: Okay. Let's take up exhibits. I
13 have 18.

14 MR. PERKO: I believe -- sorry.

15 CHAIRMAN EDGAR: That's okay.

16 MR. PERKO: I believe the only exhibit we have is
17 Exhibit Number 18, which would be the sections that
18 Mr. Guarriello is sponsoring.

19 CHAIRMAN EDGAR: Yes. And so with no objection,
20 Exhibit 18 will be entered into the record.

21 (Exhibit 18 admitted into the record.)

22 And then we need to address Exhibit 104. Any
23 objections?

24 MR. PERKO: No objection.

25 CHAIRMAN EDGAR: No objections. Okay. Exhibit

1 104 will be entered into the record, and the witness is
2 excused. Thank you.

3 (Exhibit 104 admitted into the record.)

4 We will move ahead. Next witness, please.

5 MS. RAEPPLE: Gary Brinkworth.

6 GARY BRINKWORTH

7 was called as a witness on behalf of the Florida Municipal
8 Power Agency, JEA, Reedy Creek Improvement District and the
9 City of Tallahassee and, having been duly sworn, testified as
10 follows:

11 DIRECT EXAMINATION

12 BY MS. RAEPPLE:

13 Q State your name and business address, please.

14 A My name is Gary Brinkworth. My business address is
15 400 East Van Buren Street, Tallahassee, Florida 32301.

16 Q Have you been sworn, Mr. Brinkworth?

17 A Yes, I have.

18 Q Did you submit prefiled testimony on September 19,
19 2006, in this proceeding consisting of 18 pages?

20 A Yes, I did.

21 Q Do you have any changes or additions to that
22 testimony?

23 A No, I do not.

24 Q If I were to ask you those same questions set forth
25 in your testimony today, would your answers be the same?

1 A Yes, they would.

2 Q Are you sponsoring any exhibits to your testimony?

3 A Yes, I am, one exhibit. That's GSB-1; it's a copy of
4 my resume.

5 Q And that has been marked as Exhibit 19?

6 A Yes, that's correct.

7 Q Do you have any changes to that exhibit?

8 A Yes, I have one correction. On the first page of
9 that exhibit the, my tenure as Manager of Electric System
10 Planning for the City of Tallahassee should read 1992 to 1997
11 instead of 1990 to 1997.

12 Q Are you sponsoring any sections of the need for power
13 application?

14 A Yes, I am. Those sections outlined in my direct
15 prefiled testimony.

16 Q And those sections have been marked for
17 identification as Exhibit 20?

18 A Yes, they have.

19 Q Do you have any changes to the sections of the need
20 for power application that you are sponsoring beyond the
21 changes shown in the errata which is marked as Exhibit 3?

22 A No additional changes beyond that errata sheet.

23 MS. RAEPPLE: Madam Chair, I request that
24 Mr. Brinkworth's prefiled testimony be admitted into the record
25 as though read.

1 CHAIRMAN EDGAR: The prefiled testimony will be
2 entered into the record as though read.

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1 BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

2 DIRECT TESTIMONY OF GARY S. BRINKWORTH

3 ON BEHALF OF

4 FLORIDA MUNICIPAL POWER AGENCY

5 JEA

6 REEDY CREEK IMPROVEMENT DISTRICT

7 AND

8 CITY OF TALLAHASSEE

9 DOCKET NO. _____

10 SEPTEMBER 19, 2006

11

12 **Q. Please state your name and address.**

13 A. My name is Gary S. Brinkworth. My business address is 400 East Van Buren
14 Street, Tallahassee, Florida 32301.

15

16 **Q. By whom are you employed and in what capacity?**

17 A. I am employed by the City of Tallahassee (the City) as the Manager of Electric
18 Utility Strategic Planning.

19

20 **Q. Please describe your responsibilities in that position.**

21 A. I supervise the Electric System Planning Division and have overall
22 responsibility for all system planning tasks undertaken on behalf of the City's
23 electric utility, including generation and transmission planning, load forecasting,
24 energy conservation studies, financial assessments, retail rate analysis, and

1 revenue budgeting studies. I am also responsible for development of strategic
2 plans for the electric utility and for coordinating those plans with other utility
3 departments in the City.

4
5 **Q. Please state your educational background and professional experience.**

6 A. I have a Bachelor's and Master's degree in Electrical Engineering from Auburn
7 University. I am also a registered Professional Engineer in Alabama, Florida,
8 Georgia, and Mississippi.

9
10 I have worked for the City since 1988 in a variety of electric utility system
11 planning roles, including generation planning, transmission planning, load
12 forecasting, engineering economic studies, energy conservation cost/benefit
13 studies, retail rate analysis, and financial modeling. I also have 4 years of
14 experience managing certain retail utility service functions, including customer
15 service operations, meter reading, CIS support and billing, underground utility
16 locates, marketing and environmental services. Prior to the City, I worked for
17 the Southern Company Services for 6 years where I gained experience as a
18 Generation Planning Engineer and a Transmission Planning Engineer.

19
20 **Q. What is the purpose of your testimony in this proceeding?**

21 A. I will provide a description of the City's existing generating system, summarize
22 the City's load forecast, and describe the City's projected capacity requirements.
23 In addition, I will provide a summary of the City's existing demand-side
24 management (DSM) and conservation programs, briefly discuss several strategic

1 considerations that led the City to participate in TEC, and review the City's
2 ability to finance its share of TEC. In addition, in my role as chairman of the
3 TEC project transmission study team, I will present an overview of the
4 transmission interconnections for the TEC.

5
6 **Q. Are you including any exhibits as part of your testimony?**

7 A. Yes. Exhibit __ [GSB-1] is a copy of my résumé.

8
9 **Q. Are you sponsoring any sections of Exhibit __ [TEC-1], the Taylor Energy
10 Center Need for Power Application?**

11 A. Yes, I am sponsoring Sections A.3.3.7, E.1.0, E.2.0, E.3.0, E.4.0, E.7.1, E.8.0,
12 and E.10, all of which were prepared under my direct supervision.

13
14 **Q. Please briefly describe the City of Tallahassee's existing power generation
15 system.**

16 A. The City currently operates three generating stations with a total summer net
17 capacity of 746 MW and a total net winter capacity of 797 MW. Of the three
18 generating stations, the City has two natural gas and oil fueled generating
19 stations, Sam O. Purdom Generating Station and Arvah B. Hopkins Generating
20 Station, which contain combined cycle, steam, and combustion turbine electric
21 generating facilities. The City also generates electricity at the C.H. Corn
22 Hydroelectric Station. Currently, approximately 98 percent of the City's
23 generating capacity is fueled by natural gas and oil.

24

1 **Q. Does the City currently have any firm long-term capacity sales contracts in**
2 **place?**

3 A. The City has no firm long-term capacity sales contracts in place. The City does,
4 however, conduct short-term and intermediate sale transactions as available.

5
6 **Q. Does the City have power purchase contracts in place?**

7 A. The City currently has a long-term firm capacity and energy purchase agreement
8 with Progress Energy Florida (PEF), which will expire December 3, 2016. In
9 addition to the PEF purchase agreement, the City continues to evaluate other
10 power purchase opportunities as they become available.

11
12 **Q. Are there any planned unit retirements that will affect the City's existing**
13 **generating capacity?**

14 A. Table E.2-2 of Exhibit __ [TEC-1] shows the City's current retirement schedule
15 for existing units within the planning horizon of the Need for Power
16 Application. In total, approximately 180 MW of summer capacity and 188 MW
17 of winter capacity are projected to be retired by 2025.

18
19 **Q. Is the City planning any additional modifications to its existing generating**
20 **system?**

21 A. Yes. The City is currently planning to repower the existing Hopkins Unit 2
22 steam turbine to a 1x1 combined cycle configuration through the addition of a
23 combustion turbine and a heat recovery steam generator. The repowering is
24 expected to provide an additional 68 MW of summer capacity and 96 MW of

1 winter capacity while increasing the efficiency of the unit. The repowered
2 Hopkins Unit 2 is expected to begin commercial operation in the summer of
3 2008.

4
5 **Q. Please describe the methodology used in developing the City of**
6 **Tallahassee's load forecast.**

7 A. The load forecast is developed from a set of 10 multi-variable linear regression
8 models which are based on detailed examination of the City's historical growth,
9 usage patterns, and population projections for the years 2006 through 2025. The
10 forecasts are revised each year and are estimated for residential and commercial
11 customers, and the models are capable of separately predicting commercial
12 customer consumption by rate sub-class: general service non-demand (GSND),
13 general service demand (GSD), and general service large demand (GSLD). The
14 City also uses two additional regression models to separately predict summer
15 and winter peak demand.

16
17 **Q. Are the impacts of conservation and DSM, curtailable load, and system**
18 **losses reflected in the load forecast?**

19 A. Yes. The forecasts of seasonal peak demand and annual energy requirements
20 account for each of these factors. After the initial load forecast has been
21 developed, the effects of conservation and DSM programs are applied as
22 demand and energy reductions to produce the final forecast. System losses are
23 also computed and applied in the same manner, so that the resulting base
24 forecast reflects adjustments for all these factors.

1

2 **Q. Please discuss the results of the City's base case load forecast.**

3 A. The City's base case load forecast indicates that summer peak demand is
4 projected to grow at an average annual rate of approximately 1.3 percent over
5 the 2007 through 2025 period (from 626 MW to 793 MW), while winter peak
6 demand is projected to grow at an average annual rate of approximately
7 1.8 percent over this same period (from 570 MW to 779 MW). Net energy for
8 load requirements are projected to increase at an average annual rate of
9 approximately 1.7 percent over the 2007 through 2025 period (from 2,976 GWh
10 to 4,025 GWh).

11

12 **Q. Were any alternative load forecasts developed for the City of Tallahassee.**

13 A. Yes. High and low load growth forecasts were developed.

14

15 **Q. Please discuss the results of the City's high load forecast.**

16 A. The City's high load forecast was developed by altering the assumptions for
17 population, Heating Degree Days, and Cooling Degree Days from those used in
18 the base energy forecast. In addition, the demand model was modified by
19 increasing summer peak temperatures and decreasing winter peak temperatures,
20 along with changes to the customer count. The resulting forecast indicates that
21 summer peak demand, winter peak demand, and net energy for load reach
22 824 MW, 835 MW, and 4,282 GWh, respectively, by 2025.

23

1 **Q. Please discuss the results of the City's low load forecast.**

2 A. Much like the high load forecast sensitivity, the City's low load forecast was
3 developed by altering the assumptions for population, Heating Degree Days, and
4 Cooling Degree Days from those used in the base energy forecast. In addition,
5 the demand model was modified by decreasing summer peak temperatures and
6 increasing winter peak temperatures, along with changes to the customer count.
7 The resulting forecast indicates that summer peak demand, winter peak demand,
8 and net energy for load reach 769 MW, 725 MW, and 3,812 GWh, respectively,
9 by 2025.

10

11 **Q. In your opinion is the process used for developing the demand and energy
12 forecasts reasonable for planning purposes?**

13 A. Yes. The process used in developing the demand and energy forecasts is
14 appropriate for planning purposes.

15

16 **Q. What reserve margin does the City use for planning purposes?**

17 A. The City plans to maintain a 17 percent reserve margin for both the summer and
18 winter seasons. This reserve margin was originally established based on
19 evaluations of the reliability of the City's electric system using a Loss-of-Load
20 Probability (LOLP) analysis.

21

22

1 **Q. Please describe the City's expected need for additional capacity to satisfy**
2 **reserve margin requirements under the base case load forecasts.**

3 A. The City is forecast to initially require additional capacity in 2011, at which time
4 approximately 22 MW will be required. The need for capacity is forecast to
5 increase to approximately 294 MW by 2025. Tables E.4-1 and E.4-2 of
6 Exhibit __ [TEC-1] present the City's forecast capacity requirements for the
7 summer and winter seasons, respectively.

8

9 **Q. Please discuss the City's existing conservation and DSM programs.**

10 A. The City has offered energy conservation and DSM programs to its customers
11 since the early 1980s. Currently the City offers numerous programs to both its
12 residential and commercial customers, including the following:

- 13 • Residential Secured Energy Efficiency Loans
- 14 • Residential Natural Gas Rebates
- 15 • Residential Low-Income Ceiling Insulation Grants
- 16 • Residential Low-Income Energy Retrofit Grants
- 17 • Residential Information and Audits
- 18 • Commercial Low Interest Energy Efficiency Loans
- 19 • Commercial Custom Loans
- 20 • Commercial Demonstrations
- 21 • Commercial Information and Audits

22

23

1 **Q. What benefits have the City's existing conservation and DSM programs**
2 **provided?**

3 A. Based on analysis of the City's 1996 DSM Plan, over the past 10 years, current
4 conservation and DSM programs have reduced peak demand by 20 MW and
5 annual energy use by 80 GWh.

6
7 **Q. Are there any advantages that the installation of TEC will have on fuel**
8 **diversity?**

9 A. Yes. TEC will provide a unique opportunity for the City to increase fuel
10 diversity and will increase fuel diversity throughout the State of Florida as a
11 whole. The project will have the ability to source solid fuels from both domestic
12 and international coal producing regions including the Powder River Basin
13 (PRB), Central Appalachia, Latin American, and other regions, as well as
14 petroleum coke from the Gulf Coast region and the Caribbean. Historically,
15 coals from these regions and petroleum coke have experienced significantly
16 lower prices on a \$/MBtu basis than oil and natural gas. As a result, TEC will
17 not only provide solid fuel capacity for the City and the State of Florida, but it
18 will also provide further fuel diversification through the capability to source coal
19 and petroleum coke from numerous different regions which will help mitigate
20 exposure to high natural gas and fuel oil prices. The low cost baseload energy
21 from TEC will help the City and the State of Florida reduce dependence on
22 higher cost energy from natural gas and oil.

23

1 **Q. Are there any advantages that the installation of TEC will have on fuel**
2 **supply reliability?**

3 A. Yes. The addition of solid fueled generation increases the reliability of the
4 City's fuel supply. Coal and petroleum coke inventory for up to approximately
5 90 days of operation can be stored onsite at TEC, reducing the potential supply
6 disruptions associated with natural gas like those resulting from hurricanes in
7 the Gulf Coast. Furthermore, the ability to store up to approximately 90 days of
8 fuel mitigates potential transportation disruption.

9
10 **Q. Are there any advantages that the installation of TEC will have on the**
11 **stability of the City's electric rates?**

12 A. Yes. TEC will help to satisfy the need for low cost, baseload energy within the
13 City's service territory and the State of Florida as a whole. The addition of low
14 cost, baseload energy from TEC will help to limit electric rate increases for
15 consumers and businesses. Electric rate stability will be beneficial in long-term
16 planning and should also help facilitate more stable growth within the economy.

17
18 **Q. Will the economic advantages of TEC end after 2035?**

19 A. No. Although economic evaluations have been conducted through 2035 for this
20 Taylor Energy Center Need for Power Application (Exhibit __ [TEC-1]), TEC
21 will be designed for, and is expected to have, a service life significantly greater
22 than the 23 years of operation captured by the analysis period. The benefits of
23 TEC's expected actual service life of 35 to 50 years or more have not been
24 captured in the economic analysis but are expected to be realized by the City and

1 the other project participants. Therefore, the total cost savings and benefits of
2 TEC are understated in the economic analysis.

3

4 **Q. Are there any advantages that the installation of TEC will have on**
5 **geographic diversity?**

6 A. Yes. For the City, the other project participants, and the State of Florida as a
7 whole, TEC will provide geographic diversity because it will be constructed on
8 a greenfield site. The greenfield site provides the City with baseload generation
9 without increasing the concentration of its generation resources at one location
10 or within its service territory. This diversity should increase reliability and
11 availability of generating resources, particularly in the event a hurricane or other
12 extreme condition causes forced outages in a localized area.

13

14 **Q. Do you agree with the testimony offered by Brad Kushner of Black &**
15 **Veatch that the resource plan including the TEC project represents the**
16 **least cost alternative for the City?**

17 A. Yes. In addition to reviewing the results of the model runs performed by
18 Black & Veatch for this application, the City has evaluated the cost
19 effectiveness of the TEC project as part of its own Integrated Resource Planning
20 Study.

21

22

23

24

1 Q. Did the City's resource planning study show similar results to the results
2 shown in Exhibit __ [TEC-1]?

3 A. Yes. Using additional sensitivity analyses and risk assessments particular to the
4 City's electric system, the Integrated Resource Planning Study confirmed that
5 TEC should be part of the least-cost plan for the City's electric utility.
6

7 Q. Are there other important factors that the City considered in its decision to
8 participate in TEC?

9 A. Yes. As discussed in the testimony of Paul Hoornaert, TEC will utilize proven
10 supercritical technology and include the Best Available Control Technology to
11 minimize plant emissions. Because of the City's concerns about reliability, it
12 was important that TEC utilize proven and reliable technology. The City has a
13 long history of environmental stewardship related to its utility operations, and in
14 keeping with that commitment we believe it important that TEC minimize
15 impacts to the environment.
16

17 Q. How does the City of Tallahassee intend to finance its ownership share of
18 TEC?

19 A. The City typically finances its capital projects using two funding sources.
20 During preliminary design, engineering, and permitting, the City may draw on
21 its working capital within the electric utility fund. As the initial development
22 concludes and construction commences, the City will need to initiate an electric
23 system revenue bond issuance for long-term project funding. For large projects

1 such as a coal fired power plant, the City could expect to issue either fixed or
2 floating rate revenue bonds with a term of up to 30 years.

3

4 **Q. Does the City of Tallahassee have the funding sources available to finance**
5 **its share of TEC?**

6 A. Yes. The City has the necessary funding sources available to finance the
7 development and construction of the City's ownership share of the TEC. The
8 City's electric system has credit ratings of A1 from Moody's Investors Service,
9 AA- from Standard and Poor's, and AA- from Fitch. With its excellent credit
10 rating, the City should expect that it will have no difficulties in obtaining bond
11 financing for its share of TEC.

12

13 **Q. Please summarize your role as chairman of the TEC project transmission**
14 **study team.**

15 A. In my role as chairman of the transmission study team, I coordinate the analysis
16 by the TEC partners of the proposed interconnection of the project into the
17 regional grid, and lead negotiations between the TEC project and the
18 transmission providers that will be facilitating the interconnection.

19

20 **Q. What transmission system will the Taylor Energy Center be connected to?**

21 A. The proposed TEC site is located within the Progress Energy Florida (PEF)
22 transmission system and will be connected to it.

23

1 **Q. Will the Taylor Energy Center partners be developing the associated**
2 **transmission facilities to connect the plant to the statewide grid and**
3 **facilitate the transfer of power to the project participants?**

4 A. No. Transmission facilities for the TEC project will be designed and
5 constructed by PEF pursuant to rules set forth by the Federal Energy Regulatory
6 Commission (FERC) for the interconnection of large generators. This rule
7 prescribes a process under which the TEC partners submitted a request for
8 interconnection of the proposed project. The rule also prescribes the set of
9 studies that PEF will conduct to determine if the project can be reliably
10 connected to the grid and to identify the extent of the facilities that will be
11 required. Because of the particular interconnection options being considered for
12 the project, even though the plant site is within the PEF transmission system
13 boundaries, the studies have been performed jointly by PEF and Florida Power
14 & Light (FPL).

15
16 **Q. What studies are required to determine the impact of the proposed TEC on**
17 **the transmission system?**

18 A. The FERC process requires the transmission provider to complete three studies
19 as part of the generator interconnection analysis: a feasibility study, a system
20 impact study, and a facilities study. These studies are based in part on proposed
21 interconnection alternatives developed jointly by the TEC partners and
22 PEF/FPL, and reflect power transfers modeled by the transmission providers
23 consistent with transmission service requests submitted by the TEC partners.

24

1

2 **Q. What is the current status of the studies?**

3 A. The feasibility and system impact studies have been completed, and the facilities
4 study is expected to be finished in early 2007.

5

6 **Q. What are the results of the feasibility study?**

7 A. The feasibility study indicated that under a variety of scenarios there is, in
8 general, no adverse impact caused by interconnecting TEC to the transmission
9 grid.

10

11 **Q. What is the objective of the system impact study?**

12 A. The objective of the system impact study is to identify the specific impacts on
13 the transmission system associated with the interconnection of the TEC project
14 and to propose general strategies to mitigate any of those impacts through
15 necessary improvements as identified by PEF or FPL. As a part of the system
16 impact study, PEF and FPL also developed a set of preliminary interconnection
17 plans and associated budget estimates.

18

19 **Q. What are the results of the system impact study?**

20 A. The system impact study evaluated three power transfer scenarios for four
21 different interconnection alternatives, and also assessed the impact of the
22 addition of the TEC on the Southern-Florida Interface. All these evaluations
23 were conducted jointly by PEF and FPL. The analysis included a review of
24 thermal overloads and voltage limit violations, a short-circuit study, and a

1 dynamic stability study. Based on the results presented in the system impact
2 study report, there are no significant impacts to the regional grid or the
3 Southern-Florida Interface due to the interconnection of the TEC project.
4

5 **Q. How will the project interconnect to the PEF system?**

6 A. The TEC Participants (Florida Municipal Power Agency, JEA, Reedy Creek
7 Improvement District, and the City of Tallahassee) are continuing to review the
8 results of the system impact study in order to select the interconnection
9 alternative that best meets our needs. In all four of the alternatives studied, there
10 will be two 230 kV transmission lines constructed from the plant site to PEF's
11 Perry substation in addition to other required interconnections. The alternatives
12 differ with regard to what additional facilities would also be constructed to
13 ensure reliable delivery of the output of TEC to the Participants. Currently, the
14 Participants plan to select one of the four interconnection alternatives prior to
15 the execution of the facilities study agreement.
16

17 **Q. Please describe the costs associated with the TEC interconnection.**

18 A. For evaluation purposes, the Participants assumed the direct interconnection
19 costs to be based on three 6.5 mile 230 kV transmission lines from TEC to the
20 Perry substation. The estimated cost for these lines, developed by Sargent &
21 Lundy, was projected to be about \$11.7 million. This cost has been included in
22 the TEC capital cost developed by Sargent & Lundy and is discussed in the
23 testimony of Paul Hoornaert. The preliminary cost estimates for the four
24 interconnection alternatives developed by PEF and FPL and included in the

1 system impact study vary between \$86 million and \$112 million. This is a
2 conceptual cost estimate and will be refined in the next stage of the
3 interconnection analysis.
4

5 **Q. How have the interconnection costs been included in the analysis?**

6 A. In the facilities study phase of the interconnection analysis, the costs of
7 connecting TEC to the grid will be identified by PEF and then classified as
8 either direct connection facilities or network improvements. All interconnection
9 costs will be initially funded by the TEC Participants, and then the costs of all
10 network improvements will be credited to the participants as offsets to their
11 respective transmission service charges for delivery of the power from TEC. In
12 our analysis, in addition to the \$11.7 million included in the project's capital
13 cost, we have included the transmission service charges for TEC as costs to the
14 project for each Participant as appropriate to deliver their capacity and energy
15 under the presumption that the interconnection facilities will be classified as
16 network improvements.
17

18 **Q. What if the facilities are not classified as network improvements?**

19 A. While we remain confident that the majority of the costs identified in the system
20 impact study report will be classified as network improvements, the TEC
21 participants performed a sensitivity analysis that increased the capital cost of the
22 project by about \$100 million to capture the upper end of the project's
23 transmission interconnection cost exposure based on the conceptual estimates

1 provided by PEF and FPL in the system impact study report. That sensitivity
2 analysis is presented in the testimony of Brad Kushner.

3

4 **Q. What is the objective of the facilities study?**

5 A. The primary objective of the facilities study is to develop the formal
6 interconnection plan and cost estimate and to identify the required facilities and
7 anticipated timeframe to interconnect the proposed TEC project to the
8 transmission grid.

9

10 **Q. When will the required transmission systems improvements be completed?**

11 A. Once the facilities study is complete, the TEC project owners will execute an
12 agreement with PEF for funding of the facilities, and detailed design and
13 engineering work will begin. All required transmission system improvements
14 will be completed prior to commercial operation of TEC.

15

16 **Q. Does this complete your testimony?**

17 A. Yes.

1 BY MS. RAEPPLER:

2 Q Have you prepared a summary of your testimony?

3 A Yes, I have.

4 Q Would you please present that now?

5 A My testimony addresses a number of factors that
6 support the City's need for the Taylor Energy Center. After
7 discussing basic planning assumptions related to the City's
8 existing system, its load forecasting methodology, capacity
9 planning requirements and treatment of its demand-side
10 management program impacts, I identify a number of benefits the
11 City would achieve through participation in the Taylor Energy
12 Center. These benefits include fuel and fuel supply diversity,
13 geographic diversity, improved stability of retail rates and
14 long-term economic advantages that we expect to continue beyond
15 the time period used in these planning studies.

16 The City confirmed the cost-effectiveness of its
17 participation in the Taylor Energy Center through an extensive
18 internal integrated resource planning study, the results of
19 which are consistent with the analysis presented in this
20 docket.

21 My testimony also includes material related to my
22 role as transmission team leader for the Taylor Energy Center.
23 This information deals primarily with various transmission
24 studies related to the construction of facilities that will
25 interconnect the project to the bulk power grid.

1 The applicants investigated several alternatives in
2 collaboration with Progress Energy Florida and Florida
3 Power & Light Company pursuant to FERC large generator
4 interconnection rules and tariffs. Studies conducted by
5 Progress Energy and FPL as well as an independent analysis
6 performed by the Florida Reliability Coordinating Council
7 confirmed that Taylor Energy Center will have no adverse impact
8 on the state's bulk power grid. All the transmission studies
9 associated with this interconnection request have not yet been
10 completed and cost responsibilities for the necessary
11 facilities have not been finalized. But the analysis submitted
12 in this docket demonstrates that the Taylor Energy Center
13 remains the most cost-effective option, even when reasonable
14 transmission interconnection costs have been included. That
15 concludes my summary.

16 MS. RAEPPLE: Tender the witness for
17 cross-examination.

18 CHAIRMAN EDGAR: Thank you.

19 Ms. Brownless.

20 CROSS EXAMINATION

21 BY MS. BROWNLESS:

22 Q Good morning, Mr. Brinkworth.

23 A Good morning.

24 Q I want to start out by asking you, did you answer
25 NRDC's second set of interrogatories Number 1? And I'm going

1 to hand those out.

2 And I guess we should mark this as the next exhibit,
3 Your Honor.

4 CHAIRMAN EDGAR: Ms. Brubaker.

5 MS. BRUBAKER: That would be Exhibit Number 105.
6 Short title please, Suzanne.

7 MS. BROWNLESS: It's the responses of the applicants
8 to NRDC's second set of interrogatories Numbers 1 through 8.

9 (Exhibit 105 marked for identification.)

10 THE WITNESS: Yes, ma'am. I provided the portions of
11 that response that relate to the City of Tallahassee's DSM
12 portfolio.

13 BY MS. BROWNLESS:

14 Q And that's application -- and that's found in
15 question number 1; is that correct?

16 A That's correct.

17 Q Okay. Are those true and correct to the best of your
18 knowledge and belief today, Mr. Brinkworth?

19 A Yes, they are.

20 Q Do you sit on the operating committee for TEC? Are
21 you Tallahassee's representative to participate for TEC
22 decisions?

23 A No, I'm not.

24 Q Okay. Who is that, Mr. Brinkworth?

25 A Mr. Rob Magera (phonetic) is our representative to

1 the owner's committee. I think, as Mr. Gilbert indicated
2 earlier, we don't have an operating committee yet.

3 Q Okay. Do you know whether TEC has decided -- has
4 filed its site certification application with DEP?

5 A I do not know.

6 Q On December 6th, 2006, the City approved a five-year
7 IRP which did not include the Taylor Energy Center unit; is
8 that correct?

9 A That's technically correct. However, the motion that
10 the City Commission approved specifically addressed one of the
11 four candidate resource plans that we had been presenting to
12 them as staff. That plan does, in fact, include the Taylor
13 Energy Center. So technically the five-year approval they gave
14 us, which would cover the period 2007 through 2012, actually
15 includes roughly six months of the Taylor Energy Center.

16 Q Okay. But the understanding, am I correct, was that
17 your commission would come back and specifically approve
18 another IRP at the end of this five-year period?

19 A We didn't specifically talk about approving another
20 IRP. I think the motion that they approved gave us a five-year
21 plan as a, as a base for our planning purposes, covering that
22 period, as I said, 2007 through 2012.

23 Q So the official approval you have at this time does
24 not include TEC?

25 A Does not extend beyond 2012. That's correct.

1 Q Right. So the -- if I understand correctly, the IRP
2 that was approved by your City Commission includes the expanded
3 demand-side management portfolio which has been discussed; is
4 that right?

5 A Yes, that's correct.

6 Q And that would mean, if I am correct, that your need
7 for capacity begins now in 2016; is that right?

8 A Presuming that our DSM portfolio performs as
9 forecasted, that's correct.

10 Q Okay. In the long process that you went through in
11 your integrated resource planning process individually for the
12 City of Tallahassee I know you did voluminous IRP studies and
13 voluminous sensitivity studies. Did you do a 20-year
14 individual IRP with updated TEC costs? And by updated TEC
15 costs, I mean those that include the 20 percent increase.

16 A Are you speaking about the recently updated TEC
17 capital costs?

18 Q Yes, sir.

19 A We did not directly run a case with those costs.
20 However, our sensitivity analysis included a plus 20 percent
21 analysis, which would have captured the cost increase that
22 we've recently seen for the Taylor Energy Center.

23 Q Okay. My understanding was that the 20 percent, that
24 that was a sensitivity done on the original TEC cost; is that
25 correct?

1 A That's correct.

2 Q Okay. So you have no sensitivity studies with the
3 brand new updated TEC costs and a 20 percent sensitivity study
4 on top of that.

5 A On top of that one, no, we did not do that.

6 Q The City will vote on whether to go forward with this
7 project when all permits have been acquired; is that correct?

8 A I would presume so. All the participants have that
9 opportunity.

10 Q Okay. And my understanding from Mr. Larson is that
11 the current Phase 2B agreement terminates when all permits have
12 been issued; is that right?

13 A That's true.

14 Q And presumably at that time the vote will be made
15 based upon final construction estimates for the plant; is that
16 right?

17 A I would presume so.

18 Q Okay. Because those could vary depending upon the
19 permit conditions that DEP imposes in the site application
20 process; correct?

21 A Presumably.

22 Q The availability of purchased power in Florida, do
23 you agree with others who have testified that there is a very
24 tight market for baseload capacity in Florida at this time?

25 A I think that would be a fair statement, yes.

1 Q Would you agree that if you were a seller of baseload
2 capacity, either capacity or energy on the short-term wholesale
3 market in Florida, that it would favor sellers over buyers; in
4 other words, that you could get a premium price for that
5 product?

6 A I would think so, yes.

7 Q So to the extent that the City of Tallahassee decides
8 to go forward and participate in the Taylor Energy Center and
9 has capacity available for sale, it would have a ready market
10 for that capacity.

11 A I would presume that if market conditions were not to
12 change and we were to arrive in the 2012 time frame, that
13 certainly the City would have some surplus capacity. It's
14 unlikely it would be our share of the Taylor Energy Center.

15 Q Okay.

16 A Clearly we'd have more capacity at our disposal and
17 certainly could market whatever we deemed to that would be
18 considered surplus.

19 Q Okay. And at your deposition you indicated that if
20 the savings were realized on your demand-side management
21 portfolio as you anticipate, you'd have roughly 100 megawatts
22 to sell; is that right?

23 A I think that's still probably about right. Yes.

24 Q Now the demand-side management portfolio that you've
25 incorporated into your IRP, was that put together with the help

1 of Navigant Consulting?

2 A Yes, it was.

3 Q And I want to hand out a report to you dated May 8th,
4 2006, and the name of it is Assessment of Maximum DSM Potential
5 for the City of Tallahassee.

6 And I guess this would be Exhibit 106, Your Honor.

7 CHAIRMAN EDGAR: Yes. 106.

8 (Exhibit 106 marked for identification.)

9 BY MS. BROWNLESS:

10 Q And ask you to review what's been marked for
11 identification as Exhibit 106. Is this a true and correct copy
12 of the report that you received from Navigant Consulting?

13 A Yes, it appears to be.

14 Q Thank you. Now as a result of the input from
15 Navigant Consulting and the analysis that they did -- first of
16 all, let me ask you this, is the analysis that Navigant
17 Consulting did and proposed that the City implement a FIRE
18 model analysis?

19 A No, it is not.

20 Q Okay. Can you just briefly explain to the
21 Commissioners the type of analysis that it is?

22 A Sure. It's a little different even than what's
23 outlined. This report actually outlines a meta-study that they
24 did in advance of the work we actually did to develop the DSM
25 portfolio.

1 But the work that Navigant did for us or led us in,
2 it was really a team that worked on it, involves multiple
3 steps. The first of them would be a busbar type screening of
4 candidate DSM measures. And by that I mean we would take the
5 levelized cost of the DSM measure over its lifetime. We
6 compare that to a comparable supply-side resource, levelized
7 costs over the same life as the DSM measure.

8 So if you had a DSM measure that clipped your peak in
9 the summer, for example, you'd compare that cost to the cost of
10 a combustion turbine that would be a peaking unit. And
11 measures that had longer time frames that impacted load would
12 be compared against costs of different units. So different
13 supply-side units were used to screen against different
14 demand-side programs so that their duty cycles were comparable.

15 Once those screenings were completed, DSM measures
16 that passed that screening were then put together in what we
17 call bundles based on either like end uses or like customer
18 class targets. Those bundles were assigned a chronological
19 load shape that represented the impact of that bundle on our
20 hourly load for an annual period of time. Those bundles were
21 then combined into a portfolio. Each of those load shapes was
22 merged into a single annual load shape that represented the
23 chronological impact of all of those DSM measures on our loads.
24 That load shape adjustment was applied to our baseload
25 forecast, and then our power supply plans were reoptimized

1 against that adjusted hourly load forecast.

2 Q Thank you. And as a result of that analysis you came
3 up with a bundle of demand-side management programs which
4 included existing programs the City of Tallahassee already had
5 in place as well as new programs; is that correct?

6 A That's correct.

7 Q Okay. According to Mr. Kushner, none of the City's
8 demand-side management portfolio passes the RIM test. Am I
9 correct in that?

10 A Well, you'd have to ask Mr. Kushner.

11 Q Is that your understanding, Mr. Brinkworth?

12 A I can tell you that our original screening of
13 measures in our internal IRP did not show any measures that
14 passed the rate impact test.

15 Q Thank you. Do you expect that the new demand-side
16 management portfolio will increase your rates?

17 A Over the long-term we expect that portfolio to reduce
18 our costs. Our IRP cases clearly show that the addition of
19 that portfolio results in a lower cumulative present worth
20 production cost number.

21 Q Okay. And so any time your cumulative present worth
22 capital cost number goes down, it puts pressure to keep your
23 rates down; is that correct?

24 A Well, it certainly lowers our operating costs. Of
25 course, there's a numbers, as I'm sure you're aware, there are

1 a number of fixed costs that are not typically tracked in a
2 power supply planning case. So the fact that power supply
3 costs go down doesn't necessarily directly translate into a
4 reduction in retail rates.

5 Q But it certainly puts pressure in that direction; is
6 that correct?

7 A Yes, it does. It allows for that.

8 Q Am I correct that these programs are forecasted to
9 save 162 megawatts of demand and 530 gigawatt hours of energy?

10 A Yes, they are, by 2025.

11 Q Now my understanding from your deposition,
12 Mr. Brinkworth, is that the existing demand-side management
13 programs that you have saved the City 20 megawatts over the
14 past ten years; is that correct?

15 A That's roughly correct. Yes.

16 Q So there's quite a disparity between what was
17 achieved previously and what your enhanced demand-side
18 management portfolio projects; is that right?

19 A It's significantly more aggressive, yes.

20 Q Okay. Do you expect that the City can achieve the
21 162-megawatt demand-side management savings that are contained
22 in your new portfolio?

23 A Based on the work that Navigant did for us, our
24 evaluation of the candidate measures and our discussions
25 internally with the rest of our study team, we believe that

1 that amount of DSM is achievable by 2025.

2 Q What new measures will the City put in place to
3 ensure that these savings are actually being realized?

4 A Well, I can't speak specifically to those measures
5 because the implementation of DSM portfolios is not part of my
6 responsibility. I do know that our intention is to
7 significantly increase our marketing campaigns and our customer
8 education campaigns to ensure participation in this new
9 portfolio.

10 Q Okay. Do you also intend to have more frequent
11 monitoring of these programs and to make adjustments more
12 frequently to make them more effective?

13 A Yes, we would. We plan to implement a formal and
14 ongoing measurement and evaluation program.

15 Q And isn't it also true that the investment recovery
16 period for the participants in these demand-side management
17 programs is two years or less?

18 A Generally that's true. When we designed the
19 incentive levels that are part of the budget for our
20 demand-side management portfolio we had to decide how much
21 money the City would provide as incentives and how much we'd
22 expect the customers to cover. Our existing DSM portfolio is
23 delivered almost exclusively as a loan program. We're moving
24 in this new portfolio to an incentive-based program, so we had
25 to set a budget. Navigant advised us, based on their

1 experience in other jurisdictions, customers have a tendency to
2 participate in these programs if their payback on their portion
3 of the investment in a measure is two years or less. So we set
4 the two-year window in order to ensure we had adequate
5 incentives in our budget.

6 Q And if I could just summarize that in a slightly
7 different way. Based upon Navigant's input, their experience
8 had been that two years or less encouraged the most
9 participation in that type of incentivized program?

10 A Yes, ma'am. That's correct.

11 Q And if I've asked this before, I apologize. So the
12 inclusion of this new demand-side management portfolio has
13 lowered your system productions cost; is that correct?

14 A According to our IRP studies, that's correct.

15 Q You're the transmission study team chairman for the
16 TEC project; is that right?

17 A Yes, I am.

18 Q Okay. And with regard to the transmission upgrades
19 necessary for the operation of the TEC project, my
20 understanding is there's basically two types of transmission
21 upgrades. There are transmission upgrades that are associated
22 solely with the TEC project and will only benefit the TEC
23 project; is that correct?

24 A That's correct.

25 Q Okay. And then there are transmission upgrades which

1 improve the reliability of Progress Energy's system; is that
2 correct?

3 A Yes, that's correct.

4 Q Okay.

5 A Typically you call those first category direct
6 assigned transmission facilities and the second category is
7 called network improvements.

8 Q Okay. And the transmission upgrades and facilities
9 which will only benefit TEC, the direct assigned improvements,
10 those will be paid for by TEC participants; is that right?

11 A That would be true. If they ultimately are
12 designated as direct assigned by Progress Energy, then they
13 would be fully our cost responsibility.

14 Q Right. And I think we talked about Table A3-5, which
15 is the, we handed that out yesterday, which is the basic table
16 that shows the gross breakdown of cost for this plant. And is
17 that the base estimate of \$1.7 billion on Table A3-5? Do you
18 have Table A3-5 there?

19 A I don't believe that I do.

20 (Witness handed document.)

21 Q Do you have it, Mr. Brinkworth? I'm sorry. I think
22 I gave my copy away yesterday.

23 A Yes, I do. This is -- I'm looking at actually the
24 updated Table of A3-5.

25 Q Yes, sir. Yes, sir. And is that the \$1.7 billion,

1 what you anticipate to be the directly assigned transmission
2 costs?

3 A Well, the table I'm looking at shows \$1.7 billion.
4 That's the base estimate for the entire project for the, for
5 the construction of the power plant.

6 Q Okay. And I guess, I guess my question then is does
7 the directly assigned transmission cost, is it included within
8 that number?

9 A Well, Mr. Hoornaert could tell you that for sure. My
10 understanding is that we do have a budget for what we
11 anticipate to be the likely direct assigned transmission
12 facilities included in our cost estimates.

13 Q Okay. So you think it's probably included in that
14 number?

15 A I believe that it is, yes.

16 Q Thank you. Now for the other transmission upgrades
17 which you identified as network improvements, and those would
18 be the ones that would benefit Progress Energy's ratepayers as
19 well as TEC, it's my understanding that TEC will initially pay
20 for those upgrades and the amount will be determined by -- the
21 type and amount is basically determined by Progress Energy in
22 conjunction with TEC; is that correct?

23 A That's generally correct. The last of the studies
24 that Progress Energy is currently undertaking for us is called
25 a facility study. That study will identify the cost of

1 interconnecting the project. And part of that study cost is to
2 identify the classification of those costs, be they direct
3 assigned or network improvements.

4 Once that classification has been made, then we would
5 proceed to the discussion of cost responsibilities. Direct
6 assigned costs would belong to the project.

7 Q Yes.

8 A Network improvements would belong ultimately to
9 Progress Energy. All of those costs, according to the FERC's
10 rules on large generator interconnection, all of those costs
11 would be essentially fronted by the project. We would pay
12 up-front. And then as other witnesses have pointed out today
13 and yesterday, we would receive credits against the amount of
14 those improvements that were considered to be network
15 improvements. We'd receive credits over a period of time
16 against our respective transmission charges.

17 Q Right. Because basically to use Progress Energy's
18 system to transport this power back to the participants you
19 must pay Progress Energy for use of their transmission system.

20 A That's correct.

21 Q So it would be a credit back. And as I understand,
22 you anticipate that that would come back over a period of 20
23 years with interest; is that right?

24 A Yes. That's correct.

25 Q Okay. So the bottom line is that these network

1 improvement facilities will ultimately be paid for by Progress
2 Energy's customers; right?

3 A They'll be paid for all the users of the transmission
4 system, yes.

5 Q So should the Public Service Commission approve the
6 TEC project and issue a need determination for it, then there
7 will be a financial impact on ratepayers the Public Service
8 Commission regulates and those would be ratepayers of Progress
9 Energy.

10 A Well, I'm not a rate analyst, but I would say that
11 that impact would only be to the extent that Progress elected
12 to raise their transmission base rates. And, of course, that
13 would be a question for Progress Energy.

14 Q Sure. At your deposition I asked you for a
15 late-filed exhibit, Late-Filed Exhibit Number 5, and we're
16 going to pass that out now. And this was -- and I'll read the
17 title into the record. IRP Study Update, City Commission
18 Meeting April 26th, 2006. And I just want to ask you if that's
19 a true and correct copy of your late-filed deposition exhibit.

20 And I guess this is, Your Honor, Exhibit Number 107?

21 CHAIRMAN EDGAR: Yes. We are on 107.

22 (Exhibit 107 marked for identification.)

23 THE WITNESS: This appears to be a portion of my
24 Late-Filed Exhibit Number 5. There were actually 35 pages to
25 that exhibit, and what you've passed out to me looks like the

1 first six pages of that exhibit.

2 BY MS. BROWNLESS:

3 Q Thank you. With that correction, do those first six
4 pages look true and correct to the best of your knowledge and
5 belief?

6 A Yes, they appear to be.

7 Q Okay. Now it appears to me that this is a CO2
8 sensitivity analysis; is that correct?

9 A Yes. It was an analysis that our City Commission
10 requested that we do related to risk impacts associated with
11 likely CO2 regulation.

12 Q Thank you. And that was done by Black & Veatch; is
13 that correct?

14 A Black & Veatch provided the charts that you see in
15 this, in this analysis, and, of course, Black & Veatch models
16 were used to run the production costs. But the actual CO2 cost
17 estimates were not provided by Black & Veatch.

18 Q Okay. So let me make sure I have this straight.
19 Black & Veatch used their POWROPT and POWRPRO IRP models; is
20 that right?

21 A Yes. To generate the numbers that are shown,
22 especially the numbers that are shown in the last two pages of
23 this handout you've given me, which are slides that represent
24 the cumulative present worth cost of various expansion plan
25 alternatives that we were evaluating in this time frame.

1 Q Thank you. And the CO2 emission prices that were
2 used in this model were the Synapse base case CO2 allowance
3 costs and the Synapse high CO2 allowance costs, as well as the
4 ICF-based CO2 allowance costs?

5 A Yes. All three of those sources were used in this
6 analysis.

7 Q And can you tell us what ICF is?

8 A Sure. ICF Resources are the City's fuel forecasting
9 consultant. They provided our fuel projections for the IRP
10 study and also provided our projections for the cost of
11 regulated pollutants and the forecast for CO2 costs.

12 Q Okay. So when you say the cost for regulated
13 pollutants, you mean the cost for SO2, NO2 and mercury?

14 A Yes.

15 Q Now -- and the Synapse Energy -- or the Synapse here,
16 that's Synapse Energy Economics; is that correct?

17 A Yes, that's correct.

18 Q Okay. The -- if you can answer this, great, and if
19 you can't, that's okay. The base case numbers, the Synapse
20 base case and the Synapse high CO2 case, do you know whether
21 those are provided in PSC, what's been identified as PSC
22 Exhibit Number 79 and admitted into the evidence? It was an
23 attachment to Dian Deevey's testimony. It was the Synapse
24 Energy report.

25 A I'd have to review that report. I'd be happy to do

1 that. I could answer that if I could look at the exhibit.

2 Q Sure. Hold on just a second and I'll get it to you.

3 A I do recognize this report from Synapse. It is an
4 update to an earlier assessment they provided to us as part of
5 our IRP study. And it appears from reviewing their report,
6 Figure ES1 in their report, that our numbers for what we've
7 called Synapse base in our analysis actually correspond to the
8 Synapse midcase that's in their report.

9 Q Okay.

10 A And the Synapse high numbers that we used in our IRP
11 correspond to the high case in their report.

12 Q Thank you, Mr. Brinkworth.

13 Now if I look at Page 5, and I want to make sure I'm
14 reading this correctly --

15 A Okay. We're back on my exhibit; right?

16 Q We're back on your exhibit, sir. And this is the
17 result of a POWROPT model using the CO2 emissions numbers you
18 just discussed; is that right?

19 A Yes, that's correct. It actually shows multiple
20 scenarios all the way from no CO2 allowance costs all the way
21 to the application of the Synapse high costs.

22 Q Okay. And based -- in Case Number 8, that's TEC,
23 that's the Taylor Energy Center?

24 A Yes, that's correct.

25 Q Okay. And then Case Number 4 is an IRP in which all

1 additions to the City's plan are natural gas?

2 A That's correct.

3 Q Okay. So am I right that if the Synapse high cost
4 CO2 emission allowances are used, that the Taylor Energy Center
5 is more expensive than an all natural gas scenario?

6 A Under that one set of scenarios from April 26th,
7 that's correct. That relationship does not hold true across
8 all of the cases that we did in the IRP and all of the
9 scenarios that we looked at. But for this one condition, that
10 would be true.

11 Q Okay. And am I correct that the Taylor Energy Center
12 is slightly less expensive than all gas if you use the Synapse
13 base case?

14 A Yes, that's correct.

15 Q Okay. And, again, that the Taylor Energy Center is
16 slightly less expensive than all gas if you use the ICF
17 numbers.

18 A That's also correct.

19 Q At your deposition I asked you to look at
20 Steve Urse's exhibits, and those were his Exhibits 2 through 5,
21 which have, I think, been premarked in this case as 65 through
22 68 and 70. Do you remember those questions, Mr. Brinkworth?

23 A Yes, I do.

24 Q Okay. And were all of those exhibits prepared under
25 your direct supervision and control?

1 A Not all of them. I believe that I caveated one
2 exhibit from Mr. Urse's testimony that I did not prepare or
3 that was not prepared under my supervision.

4 Q Right. And wasn't that his -- and I'm just talking
5 about his Exhibit 2, 3, 4 and 5 and 7. Wasn't Exhibit Number
6 6 the one concerning biomass that you did not --

7 A I think that's correct. I'd have to look at them
8 again. But based on your description, yes, that would be the
9 one that I did not have anything to do with.

10 Q And I'm just going to let you look at those exhibits
11 because you've got the book.

12 A Oh, yes. In looking at these exhibits, with the
13 exception of his Exhibit SU-6, all the rest of these were
14 prepared by me or under my direct supervision.

15 MS. BROWNLESS: Okay. And we'd like those identified
16 as the next exhibit, please, ma'am.

17 CHAIRMAN EDGAR: Okay. So we are on Number 108. And
18 go ahead, Ms. Brownless, and title again, please.

19 MS. BROWNLESS: It's Steve Urse's exhibits.

20 CHAIRMAN EDGAR: Okay.

21 MS. BROWNLESS: I'm sorry. May I interrupt just
22 briefly?

23 CHAIRMAN EDGAR: You may, Ms. Brubaker.

24 MS. BRUBAKER: Just for clarification, is this
25 actually exhibit, what is it, sixty --

1 MS. BROWNLESS: I'm sorry. I've confused this.
2 Excuse me. It doesn't -- it should not, as Ms. Brubaker points
3 out, be a separate exhibit. It ought to be Exhibit 65 through
4 68 and 70.

5 CHAIRMAN EDGAR: Rather than go into additional
6 numbering -- we strive for simplicity and clarity once again.

7 MS. BRUBAKER: Thank you.

8 CHAIRMAN EDGAR: Okay. So we will not number 108 and
9 we will use the prior assigned exhibit numbers.

10 MS. BROWNLESS: Yes, ma'am. Thank you.

11 BY MS. BROWNLESS:

12 Q Now, Mr. Brinkworth, did you also provide responses
13 to NRDC's second set of interrogatories to applicants' Number
14 3? And we're going to hand that to you.

15 And, Madam Chairman, I don't think these are in the
16 record. I think these do need a separate exhibit number.

17 CHAIRMAN EDGAR: Okay. Ms. Brubaker.

18 MS. BRUBAKER: Again, just for clarification, looking
19 at Exhibit 105, which was numbers 1 through 8, applicant
20 responses to NRDC's second set of interrogatories, are there,
21 is there something in this second, the document that was just
22 handed out that is not incorporated in Exhibit 105?

23 MS. BROWNLESS: No.

24 MS. BRUBAKER: Then just for ease let's keep it to
25 105.

1 MS. BROWNLESS: No, at least -- before I -- let me
2 make sure that's true, Jennifer, but it was not intended to be
3 that way.

4 CHAIRMAN EDGAR: Take just a moment to make sure
5 we've got all of the right papers in front of us.

6 MS. BROWNLESS: You're quite right. Thank you very
7 much. So we do not need this one marked either. This is
8 included already.

9 CHAIRMAN EDGAR: This is 105. Okay. Thank you.
10 Questions to the witness.

11 MS. BROWNLESS: Yes, ma'am.

12 BY MS. BROWNLESS:

13 Q In the -- I have to find my second set of questions.
14 The analysis that is shown in response to Interrogatory Number
15 3 that applies to the City of Tallahassee starts on Page 26; is
16 that correct, Mr. Brinkworth?

17 A Yes, that's correct.

18 MS. RAEPPLER: Madam Chairman, I'm going to object to
19 this line of questioning. Because if you'll look at the last
20 paragraph in these answers to interrogatories, you will
21 see that this witness did not sponsor the answers to
22 Interrogatory 3. Mr. Kushner, in fact, sponsored that
23 response.

24 BY MS. BROWNLESS:

25 Q However, this data is from the City of Tallahassee;

1 is that correct, Mr. Brinkworth?

2 A It is data that was provided by us to Mr. Kushner,
3 yes.

4 MS. BROWNLESS: And, therefore, I think it's
5 appropriate for us to talk to Mr. Brinkworth about it. It's
6 his data.

7 CHAIRMAN EDGAR: Okay. I'll allow.

8 BY MS. BROWNLESS:

9 Q And this shows a levelized cost per megawatt hour for
10 all of these programs; is that correct?

11 A Yes, it does.

12 Q Okay. So the analysis or part of the analysis as you
13 explained previously that was done for the City of Tallahassee
14 to evaluate demand-side management programs utilized a
15 dollar-per-megawatt-hour basis comparison.

16 A Our initial screening, I think as I described, was a
17 busbar sort of levelized cost over the measured life of these
18 individual programs. And that's what this data table is, is
19 presenting is that levelized cost.

20 Q Okay. And I may be able to stop if I can just have
21 three minutes.

22 If I assume that the levelized cost for TEC in
23 dollars-per-megawatt-hour basis using the new construction cost
24 numbers is about \$65 a megawatt hour, is that correct?

25 A I don't know for certain. You'd have to ask

1 Mr. Kushner.

2 Q Okay. Well, let's accept for the purposes of this
3 question that that's true, and we'll confirm that or not with
4 Mr. Kushner, then there are a whole series of programs listed
5 here whose levelized costs per megawatt hour are less expensive
6 than that; correct?

7 A There would appear to be a number of measures here
8 with a lower levelized cost. However, those measures don't
9 provide the same duty cycle as the Taylor Energy Center. And
10 as you recall from our earlier answer, our screening was done
11 based on like duty cycles. So it would be inappropriate to use
12 these levelized costs and compare to the Taylor Energy Center's
13 levelized costs and then automatically accept each and every
14 program that appeared to score a levelized cost below that
15 number.

16 Q Thank you. However, it would be an appropriate place
17 to start in terms of looking at programs; is that right?

18 A I presume so.

19 Q What is the annual electric demand growth for the
20 City of Tallahassee, do you know?

21 A Our current ten-year load forecast projects an annual
22 growth in demand of about 1.3 percent and an energy growth rate
23 of just a little greater than that. I believe it's
24 1.4 percent.

25 Q Okay. Is it true that the City's peak demand is

1 growing by approximately 10 megawatts per year?

2 A That's roughly correct, yes.

3 Q Okay. And that the current peak is approximately
4 600 megawatts?

5 A Yes, ma'am.

6 Q Okay. So that's an annual peak, peak demand growth
7 of about 1.66 percent; is that right?

8 A Yes.

9 Q Okay. Has the City's demand growth been less than
10 1 percent per year over the last five years?

11 A No. We typically see growth rates actually a little
12 higher than that.

13 Q And higher would be how much?

14 A You know, over the past ten years we've probably
15 averaged a growth rate closer to 2 percent.

16 Q Okay. Over the last five years can you give us a
17 ball park?

18 A Probably 1.5 to 2 percent.

19 MS. BROWNLESS: Thank you, Mr. Brinkworth.

20 CHAIRMAN EDGAR: Mr. Paben, any questions?

21 MR. PABEN: I think we're good.

22 CHAIRMAN EDGAR: Okay. Thank you.

23 Mr. Jacobs.

24 MR. JACOBS: Thank you, Madam Chair. I'll try and be
25 brief.

CROSS EXAMINATION

1
2 BY MR. JACOBS:

3 Q Good morning, Mr. Brinkworth. What I'd like to try
4 and do is focus in on some of the line of questioning having to
5 do with the DSM. Specifically I'd like to look at the
6 distinction in your deposition that, that I believe was made
7 between how your analysis was conducted versus the analysis
8 that was done under the FIRE model. Okay? And I think we can
9 look at Page 48 of your deposition, and really beginning at
10 Line 1 down to Line 16.

11 A You said Page 48?

12 Q Did I get it wrong? Let me make sure. I believe
13 that's it, 48.

14 A I'm looking at my deposition Page 48. The lines
15 you've identified is a discussion about fuel supply diversity.

16 Q Okay. Then somehow my numbering is not correct. My
17 apologies.

18 MS. FLEMING: Madam Chair, for ease of reference, I'd
19 like to point out that Gary Brinkworth's deposition was
20 provided to the parties, and it might help if you look at the
21 hard copy that was provided in the stack of exhibits. It's Tab
22 12 in the composite exhibit that we provided you.

23 CHAIRMAN EDGAR: Mr. Jacobs, let me pose this to you.
24 I had said we would break for lunch about 12:45 and we are
25 close. I had hoped, sorry, to get through with this witness.

1 But if it's going to take a few minutes to get papers and all
2 that and we are -- we can go ahead and break now.

3 MR. JACOBS: Certainly, Madam Chair. Sorry for the
4 --

5 CHAIRMAN EDGAR: That's, that's okay. How about we
6 go ahead, and I'm going to ask you to please come back after
7 the lunch break.

8 THE WITNESS: Yes, ma'am.

9 CHAIRMAN EDGAR: And we will -- let's see, 12:45.
10 We'll come back at 2:00 and we will move through as thoroughly
11 and timely as we're able to do.

12 We are on lunch break.

13 (Recess taken.)

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1 STATE OF FLORIDA)
 :
2 COUNTY OF LEON)

CERTIFICATE OF REPORTER


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I, LINDA BOLES, CRR, RPR, Official Commission Reporter, do hereby certify that the foregoing proceeding was heard at the time and place herein stated.

IT IS FURTHER CERTIFIED that I stenographically reported the said proceedings; that the same has been transcribed under my direct supervision; and that this transcript constitutes a true transcription of my notes of said proceedings.

I FURTHER CERTIFY that I am not a relative, employee, attorney or counsel of any of the parties, nor am I a relative or employee of any of the parties' attorneys or counsel connected with the action, nor am I financially interested in the action.

DATED THIS 16th day of January, 2007.



LINDA BOLES, CRR, RPR
FPSC Official Commission Reporter
(850) 413-6734