

1 BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

2 DIRECT TESTIMONY OF MYRON R. ROLLINS

3 ON BEHALF OF

4 FLORIDA PUBLIC UTILITIES COMPANY

5 DOCKET NO. 080411

6 JUNE 1, 2009

7

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

9 A. My name is Myron R. Rollins. My business address is 11401 Lamar Avenue,
10 Overland Park, Kansas 66211.

11

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

13 A. I am employed by Black & Veatch Corporation. My current position is
14 Director.

15

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

17 A. I am responsible for the management of various projects for utility and non-
18 utility clients. These projects encompass a wide variety of services for the
19 power industry. The services include load forecasts, conservation and demand-
20 side management, reliability criteria and evaluation, development of generating
21 unit addition alternatives, fuel forecasts, screening evaluations, production cost
22 simulations, optimal generation expansion modeling, economic and financial
23 evaluation, sensitivity analysis, risk analysis, power purchase and sales
24 evaluation, strategic considerations, analyses of the effects of environmental

1 regulations, feasibility studies, qualifying facility and independent power
2 producer evaluations, power market studies, and power plant financing.

3

4 **Q. Please describe Black & Veatch.**

5 A. Black & Veatch Corporation has provided comprehensive engineering,
6 consulting, and management services to utility, industrial, and governmental
7 clients since 1915. Black & Veatch specializes in engineering, consulting, and
8 construction associated with utility services, including electric, gas, water,
9 wastewater, telecommunications, and waste disposal. Service engagements
10 consist principally of investigations and reports, design and construction,
11 feasibility analyses, rate and financial reports, appraisals, reports on operations,
12 management studies, and general consulting services. Present engagements
13 include work throughout the United States and numerous foreign countries.

14

15 **Q. Please state your educational background and experience.**

16 A. I received a Bachelor of Science degree in Electrical Engineering from the
17 University of Missouri – Columbia. I also have two years of graduate study in
18 Nuclear Engineering at the University of Missouri – Columbia. I am a licensed
19 professional engineer and a Senior Member of the Institute of Electrical and
20 Electronic Engineers.

21

22 I have 33 years of experience in the power industry specializing in generation
23 planning and project development. In the past ten years, I have been the project
24 manager for over 100 projects, the vast majority of which have been for Florida

1 utilities. Florida utilities for which I have worked include Florida Public
2 Utilities Company (FPUC), Florida Municipal Power Agency (FMPA),
3 Kissimmee Utility Authority, Lakeland Electric, Orlando Utilities Commission
4 (OUC), JEA, City of Tallahassee, Reedy Creek Improvement District (RCID),
5 City of St. Cloud, Utilities Commission of New Smyrna Beach, Sebring Utilities
6 Commission, City of Homestead, Florida Power Corporation, Tampa Electric
7 Company, and Seminole Electric Cooperative.

8

9 I was responsible for the development of Black & Veatch's POWRPRO
10 chronological production costing program and POWROPT optimal generation
11 expansion program. I am also responsible for power market analysis and project
12 feasibility studies. I have been responsible for supporting need for power
13 petitions on a number of power plants in Florida including Stanton 1, 2, A,
14 and B; Cedar Bay; Cane Island 3 and 4; McIntosh 5; the Brandy Branch
15 Combined Cycle Conversion, Greenland Energy Center, and Treasure Coast
16 Unit 1;. I also participated in the need for power proceeding for the Hardee and
17 Hines projects. I have presented expert testimony on several occasions before
18 the Alaska, Indiana, Missouri, and Florida public service commissions and have
19 presented numerous papers on strategic planning and cogeneration.

20

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

22 A. The purpose of my testimony is to discuss FPUC's avoided costs provided to
23 Itron for use in the economic and achievable conservation and demand-side
24 management evaluations.

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24

Q. Are you sponsoring any exhibits to your testimony?

A. Yes. Exhibit No. ___ [MRR-1] is a copy of my résumé, Exhibit No. ___[MRR-2] presents FPUC's avoided costs.

Q. Please describe FPUC's power supply?

A. FPUC is unique among the Florida Energy Efficiency and Conservation Act (FEECA) utilities in that FPUC purchases all of its power supply requirements from JEA and Gulf Power Company. FPUC provides electric service to approximately 34,000 customers in two separate geographic areas – the Northeast Division headquartered in Fernandina Beach serving customers on Amelia Island and the Northwest Division headquartered in Marianna serving customers in all or parts of Jackson, Calhoun and Liberty counties. JEA serves the Northeast Division and Gulf Power serves the Northwest Division. The load in the two Divisions is approximately equal.

Q. Please describe how FPUC's avoided costs are calculated?

A. FPUC's avoided costs are the purchase power costs. The purchase power costs for each Division are calculated and averaged together to obtain the avoided costs for FPUC. Purchase power costs are estimated for the following cases.

- Reference Case
- CO₂
- Low Fuel/Low CO₂
- High Fuel/High CO₂

- 1 • Low Capital
- 2 • High Capital

3

4 **Q. Please describe the avoided cost for the purchase power from JEA?**

5 **A.** JEA provided average fuel costs including variable operation and maintenance
6 (O&M) cost, and emission allowance costs for various cases evaluated by Itron.
7 These average fuel costs were from the production cost model runs that JEA
8 used to determine JEA's avoided costs in the Conservation Goals Docket. JEA
9 also provided projections of purchase power costs through May 2011 for FPUC.
10 The annual increases in the average fuel prices were applied to energy price
11 portion of the purchase power price to obtain projections of FPUC's JEA
12 avoided energy costs. JEA's avoided capacity costs from JEA's Conservation
13 Goals Docket were combined with FPUC's generation demand costs along with
14 transmission, ancillary service, distribution, and distribution O&M costs to
15 obtain FPUC's JEA avoided capacity costs.

16

17 **Q. Did JEA include emission allowance costs in the average energy costs?**

18 **A.** Yes. JEA included SO₂, NO_x, and CO₂ allowance price projections developed
19 by the Energy Information Administration as appropriate for each case.

20

21 **Q. How were the avoided costs for Gulf Power developed for the reference**
22 **case?**

23 **A.** FPUC did not receive any projected purchase power costs from Gulf Power.
24 The existing Gulf Power purchase energy costs were escalated at 2 percent

1 annually. FPUC is billed on a demand ratchet by Gulf Power for capacity costs.
2 FPUC's load in the Northwest Division has dropped and FPUC does not believe
3 that they will ever exceed the ratchet. Thus FPUC's Gulf Power avoided
4 capacity costs are assumed to consist of only FPUC's avoided distribution and
5 distribution O&M costs.

6
7 **Q. How were FPUC's avoided costs developed for the other cases?**

8 A. The avoided energy costs were escalated at the escalation rates developed for the
9 JEA avoided energy costs. The avoided capacity costs did not change.

10

11 **Q. How were the FPUC avoided costs obtained from the JEA and Gulf Power**
12 **avoided costs?**

13 A. The JEA and Gulf Power avoided energy and avoided capacity costs were
14 averaged.

15

16 **Q. How were the avoided costs developed for the low and high capital cost**
17 **cases?**

18 A. The avoided capacity costs were decreased 20 percent for the low capital cost
19 case and increased 20 percent for the high capital cost case. The avoided energy
20 cost was the same as for the reference case.

21

22 **Q. Please provide the avoided capacity and energy costs provided to Itron.**

23 A. The avoided capacity and energy costs are presented in Exhibit No. __ [MRR-2].

1 Q. Does this conclude your pre-filed testimony?

2 A. Yes.

RESUME OF
MYRON R. ROLLINS

Black & Veatch

Director

*Project Management;
Integrated Resource
Planning; Permitting
and Licensing;
Feasibility Studies and
Project Development*

Mr. Rollins is a Director in Enterprise Management Solutions. He is responsible for management of system planning and feasibility studies encompassing the areas of integrated resource planning, load forecasting, generation planning, cogeneration, site selection, and other special studies.

Mr. Rollins specializes in generation planning and project development. He is responsible for numerous power supply studies incorporating integrated planning techniques. Mr. Rollins was responsible for the development of Black & Veatch's POWRPRO chronological production costing program and POWROPT optimal generation expansion program. He is also responsible for power market analysis and project feasibility studies. Mr. Rollins extends his expertise in generation system planning to the area of need for power certification of power plants.

Education

Bachelors, Electrical, University of Missouri at Columbia, 1974

Professional Registration

Engineer (PE), Missouri, 1982

Total Years Experience

32

Joined B&V

1976

Mr. Rollins has broad expertise in planning and project development that enables him to assist clients in the development of expansion plans and specific projects in a realistic manner that incorporates the required balance between engineering and cost considerations as well as sociopolitical and licensing considerations. With this experience, Mr. Rollins has successfully helped utility and developer clients add value to their systems and projects throughout his career.

Professional Associations

MoKan American Nuclear Society – Past President
Institute of Electrical and Electronics Engineers – Senior Member

Mr. Rollins has presented expert testimony on several occasions before the Alaska, Florida, Indiana and Missouri Public Service Commissions, and has published numerous papers on strategic planning and cogeneration. He is past chairman of the Mo-Kan section of the American Nuclear Society and a senior member of IEEE.

Language Capabilities

English

Representative Project Experience

*Need for Power Certification, Orlando Utilities Commission, Florida
2005-2006*

Project Manager. Managed the preparation of a Need for Power Application for Orlando Utilities Commission's Stanton Energy Center Unit B. Stanton B is a proposed IGCC unit to be constructed at Stanton Energy Center in Orlando, Florida. The application was submitted to the Florida Public Service Commission under the Electrical Power Plant Siting Act. The Need for Power Application evaluated Stanton B against

other self-build alternatives and demand-side management alternatives. The Florida Public Service Commission unanimously approved the need for Stanton B.

Need for Power Certification, Florida Municipal Power Agency, Florida

2005

Project Manager. Managed the preparation of a Need for Power Application for Florida Municipal Power Agency's (JEA's) Treasure Coast Energy Center (TCEC) Unit 1. TCEC Unit 1 is a proposed 1x1 F class combined cycle unit to be constructed on a greenfield site in Ft. Pierce, Florida. The application that was submitted to the Florida Public Service Commission under the Florida Electrical Power Plant Siting Act. The Need for Power Application evaluated TCEC Unit 1 against other self-build alternatives, purchase power from a request for proposals (RFP) process, and demand-side management alternatives. The Florida Public Service Commission unanimously approved the need for TCEC Unit 1.

Integrated Resource Plan, City of Tallahassee, Florida

2005-2006

Project Manager. Managing an integrated resource plan (IRP) for the City of Tallahassee. The IRP involves extensive evaluation of gas and coal fueled alternatives. More than 140 demand-side management (DSM) measures were evaluated. The IRP includes extensive evaluation of the impacts from the Clean Air Interstate Rule (CAIR) and Clean Air Mercury Rule (CAMR). Biomass generation was evaluated as part of the IRP. Extensive probabilistic risk analysis was also conducted.

Integrated Resource Plan, JEA, Florida

2005-2006

Project Manager. Managing an integrated resource plan (IRP) in conjunction with JEA. The IRP involves extensive evaluation of gas and coal fueled alternatives including the development of site-specific estimates. Requirements for the Clean Air Interstate Rule (CAIR) and Clean Air Mercury Rule (CAMR) were included in determining air quality control additions necessary for existing units. Demand-side management (DSM) evaluation made use of previous work conducted by Black & Veatch as part of JEA's Conservation Goal Docket before the Florida Public Service Commission.

Integrated Resource Plan Review, City of Lakeland, Florida

2005

Project Manager. Managed the review of the development of the City of Lakeland's integrated resource plan (IRP). The review encompasses all aspects of the IRP including load forecast, fuel forecast, development of supply side alternatives, life extension, and expansion planning. In

addition, Black & Veatch evaluated demand-side management alternatives for the City of Lakeland.

***Expert Testimony, Indiana Municipal Power Agency, Indiana
2004***

Project Manager. Presented expert testimony before the Indiana Utility Regulatory Commission for issuance of a Certificate of Public Convenience and Necessity. The testimony covered the technical and economic feasibility for three coal generating unit projects in which the Indiana Municipal Power Agency planned to participate.

***St. Johns River Power Park Annual Report, JEA, Florida
2004***

Project Manager. Managed preparation of the annual report on the operation and maintenance of St. Johns River Power Park consisting of two 675 MW pulverized coal units burning a mix of coal and petroleum coke. The units are jointly owned by Florida Power & Light Company and JEA. The annual operation and maintenance report is required to be submitted to the bond trustee under JEA's bond covenants.

***Ten Year Site Plan, Orlando Utilities Commission, Florida
2004***

Project Manager. Managed the preparation of the Ten Year Site Plan for Orlando Utilities Commission as required by the Florida Public Service Commission. The Ten Year Site Plan is an integrated resource expansion plan for the utility including load forecast, fuel price forecast, demand side management, and generation expansion.

***Stock Island Combustion Turbine Unit 4 Development and Licensing,
Florida Municipal Power Agency, Florida
2004***

Project Manager. Managed development of the project description, the conceptual design, the development of lease and operating agreements, and permitting and licensing of a LM6000 simple cycle combustion turbine located at Key West, Florida. In addition, studies of the method of project execution, either EPC or traditional design and construction management, were developed along with a detailed schedule and cost estimate.

***Combined Cycle Site Selection Study, Florida Municipal Power
Agency, Florida
2004***

Project Manager. Managed the site selection study for a 1x1 F class combined cycle for Florida Municipal Power Agency (JEA). The site selection study initially evaluated four JEA member generation sites. From those four sites, two were selected for detailed evaluation. The site selection study evaluated fatal flaws and permitting requirements, natural gas supply, water supply, wastewater disposal, and transmission

interconnection requirements. The study evaluated construction and operating costs differences between the two sites. The study also evaluated the ability to deliver power to the East system and the associated economic impacts of wheeling costs to get power to the East system. The study recommended selection of a site in St. Lucie County. Final permitting is currently under way for construction of the unit.

*Independent Assessment, Edwards & Angell, Florida
2003*

Project Manager. Managed an independent assessment of the current state and cost to complete of a partially completed combined cycle repowering project in Lake Worth, Florida for Edwards & Angell, the City of Lake Worth's bond attorney. The study involved developing an estimate to complete the project as a simple cycle combustion turbine and providing consultation on the development of a new natural gas transportation agreement and a memorandum of understanding between the existing owner, AES, and the new purchaser of the project, Florida Municipal Power Agency. The assignment also involved review and advise on numerous other project agreements.

*Cane Island Feasibility Study, Florida Municipal Power Agency,
Florida
2002*

Project Manager. Managed a feasibility study for the installation of a 1 x 1 F class combined cycle at the existing Cane Island Power Park. The study addressed site arrangement, the availability of cooling water, and the disposal of wastewater.

Table 1 - FPUC Avoided Energy Costs for Sensitivity Cases

Year	Base	Regulated CO2	High Fuel, High CO2	Low Fuel, Low CO2
2010	69.40	69.40	70.76	68.24
2011	70.20	70.20	72.08	68.72
2012	71.96	96.74	150.70	81.00
2013	71.49	99.32	149.22	81.52
2014	72.31	102.86	156.73	83.04
2015	74.06	107.30	165.55	85.07
2016	72.37	110.75	174.41	86.23
2017	71.90	113.73	181.31	88.09
2018	73.47	119.59	193.81	91.82
2019	75.55	125.61	205.21	95.51
2020	77.67	131.76	216.66	99.50
2021	79.84	137.12	228.62	103.40
2022	82.65	143.32	240.95	107.61
2023	85.26	149.69	255.37	112.23
2024	88.21	156.42	271.54	117.01
2025	90.72	163.49	288.75	122.08
2026	93.72	170.80	308.32	127.42
2027	97.04	179.51	330.38	133.68

Table 2 – Low and High Capital Cost Avoided Energy and Capacity Sensitivity Case

Year	<u>Avoided Energy Cost</u> \$/MWh	<u>Low Capital Cost</u> \$/kW-yr	<u>High Capital Cost</u> \$/kW-yr
2010	69.40	62.71	94.07
2011	70.20	65.26	97.88
2012	71.96	65.26	97.88
2013	71.49	65.26	97.88
2014	72.31	65.26	97.88
2015	74.06	65.26	97.88
2016	72.37	65.26	97.88
2017	71.90	65.26	97.88
2018	73.47	65.26	97.88
2019	75.55	65.26	97.88
2020	77.67	65.26	97.88
2021	79.84	65.26	97.88
2022	82.65	67.47	101.21
2023	85.26	69.62	104.44
2024	88.21	71.32	106.98
2025	90.72	73.35	110.03
2026	93.72	75.69	113.53
2027	97.04	76.48	114.72