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BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

DIRECT TESTIMONY OF

DANIEL L. RODERICK

ON BEHALF OF

PROGRESS ENERGY FLORIDA

DOCKET NO. 080007-EI

AUGUST 29, 2008

Q. Please state your name and business address.

A. My name is Daniel L. Roderick. My business address is Crystal River Energy Complex, Site Administration 2C, 15760 West Power Line Street, Crystal River, Florida 34428.

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

A. I am employed by Progress Energy Florida (“PEF” or the “Company”) in the capacity of Vice President – Nuclear Projects & Construction. As Vice President – Nuclear Projects & Construction, I am responsible for the management and oversight of all large, capital nuclear projects for the Company. These include the Crystal River Unit 3 (“CR3”) power uprate project, the CR3 steam generator replacement project scheduled for 2009, and the development, siting, engineering, and construction of two new nuclear generating facilities at the Company’s Levy County site. Prior to assuming my current position, I served as the CR3 Director of Site Operations. In that capacity, I was responsible for the safe, efficient, and

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1 reliable generation of electricity from the Company's CR3 nuclear plant. All plant
2 functions, including the Plant General Manager, Engineering Manager, Training
3 Manager, and Licensing, reported to me and were under my supervision.
4

5 **Q. Please summarize your educational background and work experience.**

6 A. I have a Bachelor of Science and Master of Science degree in Industrial
7 Engineering from the University of Arkansas and have completed the Nuclear
8 Regulatory Commission (NRC) program for a Senior Reactor Operator License. I
9 have been at CR3 since 1996, serving in my current position as Vice President
10 Nuclear Projects and Construction and, prior to that position, Director of Site
11 Operations, Plant General Manager, Engineering Manager, and Outage Manager,
12 respectively. Prior to my employment with the Company, I was employed for
13 twelve years with Entergy Corporation at its Arkansas Nuclear One plant in
14 Russellville, Arkansas with responsibilities in Plant Operations and Engineering.
15

16 **Q. What is the purpose of your testimony?**

17 A. The purpose of my testimony is to support PEF's request to recover, through the
18 Environmental Cost Recovery Clause ("ECRC"), prudently incurred costs for its
19 Crystal River Units 1 and 2 ("CR1&2") Thermal Discharge Compliance Project.
20 The permanent solution associated with the CR1&2 thermal discharge limit is
21 being undertaken in coordination with the CR3 Uprate project POD impacts as it
22 makes more sense to consider the project as a whole from an engineering

1 perspective. I am responsible for the successful management of the Uprate project
2 and, as such, this project falls under my umbrella of responsibility as well.

3

4 **Q. Please describe PEF's CR1&2 Thermal Discharge Compliance Project.**

5 A. In Docket No. 060162-EI, the Commission approved recovery of costs associated
6 with installation and operation of leased Modular Cooling Towers to maintain
7 compliance with the thermal discharge limit in the Florida Department of
8 Environmental Protection ("FDEP") industrial wastewater discharge permit for
9 Crystal River Units 1&2. See Order No. PSC-07-0722-FOF-EI (Sep. 5, 2007).
10 Consistent with PEF's petition and the final order in Docket No. 060162, PEF has
11 continued to evaluate the long term nature and extent of the issue associated with
12 increased inlet water temperatures that triggered the need for additional cooling
13 capacity to maintain compliance with the FDEP permit while minimizing derates
14 of CR1&2.

15

16 Based on the on-going avoided derates experienced in 2006 (approximately
17 62,360 MWhs) and 2007 (approximately 180,500 MWhs), PEF believes the
18 thermal discharge problem is a long-term issue that must be addressed. With this
19 in mind, PEF asked Sargent & Lundy to study the issue and make a
20 recommendation for what the optimal solution is for both the on-going
21 environmental issue as well as the additional cooling that will be required as part
22 of the CR3 Uprate project. The Project's study phase recommendation is to
23 install a 12 cell circular cooling tower and expand the number of Helper Cooling

1 Tower ("HCT") cells. PEF is continuing to refine the exact final permanent
2 solution based on on-going engineering analysis. The 2009 projection of costs
3 are based on the most up-to-date estimate available at this time consistent with
4 Sargent & Lundy's estimates.

5

6 **Q. Please explain the basis for the Company's decision to install the new cooling**
7 **capacity rather than continue with the Modular Cooling Towers.**

8 A. The Sargent & Lundy Phase 1 report looked at what was more cost effective,
9 continued operation of the Modular Cooling Towers, or some other more
10 permanent kind of cooling solution. Based on the results of the Sargent & Lundy
11 Phase 1 study based on the facts and circumstances known at the time of the
12 Study it appears a permanent cooling solution makes more sense from both a
13 technical and financial perspective. PEF is continuing to look at what the best
14 solution is taking all variables into account.

15

16 **Q. What activities does PEF anticipate undertaking for the CR1&2 Thermal**
17 **Discharge Compliance Program in 2009?**

18 A. The activities to be conducted in 2009 primarily include engineering, design and
19 procurement of equipment (e.g., lift pumps, fabricated steel, dual flow screens,
20 cooling towers, piping, valves, switchgear and storage facility). PEF also
21 expects to incur project and construction management costs. This work will be
22 done in conjunction with the installation of additional cooling capacity needed to

1 accommodate the CR3 uprate project. However, PEF only seeks ECRC recovery
2 of the costs attributable to replacement of the Modular Cooling Towers.

3

4 **Q. What environmental laws or regulations require implementation of the**
5 **CR1&2 Thermal Discharge Compliance Project?**

6 A. As recognized in Order No. PSC-07-0722-FOF-EI issued in Docket No. 060162-
7 EI, the additional cooling capacity is required to maintain compliance with the
8 thermal discharge limit in the CR1&2 industrial wastewater discharge permit
9 whose effect was triggered by the unanticipated high inlet water temperatures,
10 which were not fully analyzed until after PEF's last ratemaking proceeding in
11 Docket No. 050078-EI.

12

13 **Q. Has the Company projected the costs that it will incur for the CR1&2**
14 **Thermal Discharge Compliance Project?**

15 A. Yes. PEF's preliminary cost estimates for the entire cooling project in 2009 is
16 approximately \$20 million. Of this \$20 million, PEF preliminarily estimates
17 approximately 58% (\$11.6 million) is attributable to replacement of the leased
18 Modular Cooling Towers. The remainder of the 2009 project costs will be
19 attributable to the CR3 uprate project. The total cost of the project inclusive of
20 costs attributable to the CR3 uprate project is approximately \$103 million.
21 PEF's preliminary estimate of the total cost associated with the long term
22 solution to the CR1&2 thermal discharge compliance issue is approximately \$60
23 million.

1 **Q. What measures will PEF be implementing to ensure that costs incurred for**
2 **the CR1&2 Thermal Discharge Compliance Project are reasonable and**
3 **prudent?**

4 A. The majority of the 2009 work will be contracted using the PEF competitive bid
5 process. The competitive bid process obtains proposals from several potential
6 contractors. The proposals are then evaluated and awarded based on technical
7 merit and cost effectiveness.

8

9 **Q. Does this conclude your testimony?**

10 A. Yes, it does.