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BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

DIRECT TESTIMONY OF

JEFFREY SWARTZ

ON BEHALF OF

DUKE ENERGY FLORIDA

DOCKET NO. 130007-EI

AUGUST 30, 2013

Q. Please state your name and business address.

A. My name is Jeffrey Swartz. My business address is 299 First Avenue North, St. Petersburg, FL 33701.

Q. Have you previously filed testimony before this Commission in Docket No. 130007-EI?

A: Yes, I provided direct testimony on April 1, 2013 and August 1, 2013.

Q. Has your job description, education background or professional experience changed since that time?

A: No.

Q. What is the purpose of your testimony?

A. The purpose of my testimony is to provide estimates of costs that will be incurred in 2014 for Duke Energy Florida's (DEF or Company) CAIR/CAMR Continuous Mercury Monitoring System (CMMS) (Project 7.3), Integrated

1 Clean Air Compliance Program (Project 7.4) and Mercury and Air Toxics
2 Standards (MATS) Program – Crystal River Units 1 & 2 (CR1&2) (Project
3 17.2).

4
5 **Q. Have you prepared or caused to be prepared under your direction,**
6 **supervision or control any exhibits in this proceeding?**

7 A. Yes. I am sponsoring Exhibit No. __ (JS-1), which is an organization chart for
8 DEF’s Crystal River Clean Air Projects. I am also co-sponsoring the following
9 portions of Exhibit No. __ (TGF-5) to Thomas G. Foster’s direct testimony:

- 10 • 42-5P page 7 of 21 – Clean Air Interstate Rule (CAIR).
- 11 • 42-5P page 21 of 21 – Mercury and Air Toxics Standards (MATS)
12 Program – CR1&2.

13
14 **Q. What O&M costs does DEF expect to incur in 2014 in connection with the**
15 **air emission controls at Crystal River Units 4 and 5 (CR4&5) as part of the**
16 **Integrated Clean Air Compliance Program (Project 7.4)?**

17 A. DEF estimates O&M costs of approximately \$35.7 million to support the
18 operation and maintenance of air emissions controls that were installed at the
19 Crystal River Energy Complex as outlined in DEF’s Integrated Clean Air
20 Compliance Plan as follows:

- 21 • Labor costs are estimated at approximately \$7.1 million. This estimate is
22 based on current staffing levels. Contractor expenses are estimated at
23 approximately \$4.3 million for various services.
- 24 • Parts and materials are estimated at approximately \$1.9 million.

- 1 • Other costs are estimated at approximately \$0.6 million.
- 2 • Crystal River Units 4&5 outage costs are estimated at approximately \$2.2
- 3 million.
- 4 • Project expenses for ball mill, absorber recycle pump, oxidation air blower,
- 5 dewatering system and conveyor maintenance are estimated at
- 6 approximately \$1 million.
- 7 • Reagent costs (ammonia, limestone, dibasic acid, hydrated lime, caustic and
- 8 net gypsum sales/disposal) are estimated to total approximately \$18.6
- 9 million.

10

11 **Q. What capital costs does DEF expect to incur in 2014 associated with the**

12 **implementation of the Integrated Clean Air Compliance Program (Project**

13 **7.4)?**

14 A. DEF estimates capital costs of approximately \$3.2 million for the Integrated

15 Clean Air Compliance Program in 2014 including:

- 16 • \$0.7 million for a clinker mitigation system on CR5 to reduce clinker
- 17 formation. Clinkers are hard masses forming in the FGD inlet ducts of
- 18 CR4&5 as a result of the high temperature differential between the flue gas
- 19 and limestone slurry. The project installs a permanent water spray system in
- 20 the FGD flue gas inlet which will reduce the temperature differential thereby
- 21 reducing clinker formation. The CR4 clinker mitigation project was
- 22 completed in 2013.
- 23 • \$2 million of development and engineering of a FGD wastewater system for
- 24 FGD blowdown needed to comply with FDEP wastewater permit conditions.

1 • \$0.5 million of development and engineering of a reclaimed water reuse
2 system, an alternative water project, to comply with the Conditions of Site
3 Certification requirements regarding the rolling annual average daily
4 withdrawal rate of groundwater from the CR4&5 well field.

5
6 **Q. What steps is the Company taking to ensure that the level of expenditures**
7 **for the operation of the CR4&5 controls is reasonable and prudent?**

8 **A.** Plant management monitors and controls costs by several methods. Work is
9 scheduled and conducted proactively and efficiently. Expenditures are reviewed
10 and approved by the appropriate level of management per existing Company
11 policies. All expenditures are monitored on a monthly basis, and budget
12 variances are analyzed for accuracy and appropriateness.

13
14 **Q. Please discuss the organization being used to operate and maintain the**
15 **CAIR equipment?**

16 **A.** The Company established a dedicated unit to manage, operate and maintain the
17 CAIR equipment. An organization chart is attached as Exhibit__(JS-1). This
18 unit consists of 52 employees that report to the Crystal River Energy Complex
19 station manager and 1 employee who reports to the Manager PEF Generation
20 Finance. There are 8 managers and 45 maintenance, operations and support
21 employees. The operators work rotating shifts in order to staff the operations of
22 the facility 24 hours per day. The maintenance employees primarily work days
23 but shift employees are available to work when needed. In an effort to keep

1 regular staffing levels low, contractors are used for specialized or lower-skilled
2 work which minimizes overall operations and maintenance costs.

3

4 **Q. Are there policies and procedures in place to efficiently operate and**
5 **maintain these assets?**

6 A. Yes, there are several different policies and procedures used to efficiently
7 operate and maintain the CAIR equipment. First and foremost, the plant follows
8 all OSHA and DEF safety-related policies and procedures. It also follows
9 operations and maintenance procedures during startups, shut downs, steady state
10 situations and transient scenarios. All employees are trained to respond
11 effectively to many different operating scenarios as part of these procedures.
12 The operating and maintenance procedures were developed during construction
13 and startup, and continue to be revised as more experience and expertise is
14 gained with the equipment.

15

16 The plant uses existing corporate-wide policies and procedures to efficiently
17 conduct business such as human resources (hiring, compensation, and
18 performance management), supply chain management (purchasing, contracting,
19 and inventory) and information technology (NERC Critical Infrastructure
20 Protection).

21

22 **Q. Are personnel operating and maintaining this equipment trained in these**
23 **policies and procedures?**

1 A. Yes, the personnel selected to operate and maintain CAIR equipment have to
2 meet specific job-related qualifications in order to qualify for the positions they
3 are selected to perform. Some employees are hired from outside companies and
4 come to DEF with previous experience operating this type equipment at other
5 utilities. Other operations employees are selected to participate in an apprentice
6 program. These employees must complete a 2 to 4 year training program before
7 they are fully qualified workers. This training includes a mix of classroom and
8 hands-on training that helps the employee progress through different levels of
9 task proficiency. Maintenance employees are selected based on their skills and
10 experience, and are also provided equipment specific training to optimize the
11 maintenance of the equipment.

12
13 Equipment-specific training was conducted during the construction and start-up
14 phase of the project and continues as major equipment overhauls are performed.
15 This training included equipment walk-downs, discussions with vendor
16 representatives, and hands-on operating and maintenance work performed under
17 the supervision of qualified individuals.

18
19 From a business process standpoint, CAIR employees are trained on these
20 policies and procedures using several different training methods that include
21 required reading and review of the policies and procedures, small group
22 discussions, one-on-one discussions with subject matter experts, computer based
23 training (CBT) and on the job task training.

24

1 **Q. Does the Company have controls in place to ensure these policies and**
2 **procedures are followed?**

3 A. The Company ensures compliance with policies and procedures through
4 management controls, equipment round checklists, procedure sign-offs and
5 internal audits. The level of controls is based on the particular policy or
6 procedure.

7
8 **Q. Are there any other mechanisms in place to ensure proper operation and**
9 **maintenance of these assets?**

10 A. Along with the above-mentioned methods, prudent engineering judgment and
11 industry standards are used to ensure proper operation and maintenance of CAIR
12 equipment. The FGD Engineer (System Owner) works directly with operations
13 and maintenance personnel to ensure that systems are working in accordance
14 with design parameters.

15
16 Routine maintenance is performed on a regular and on-going basis. In addition,
17 specialized inspection and maintenance work is conducted during scheduled unit
18 and equipment outages. These specialized work activities are identified and
19 refined as the Company gains more operational experience with the equipment.

20
21 **Q. What costs does DEF expect to incur in 2014 in connection with the**
22 **Mercury and Air Toxics Standards (MATS) Program – CR1&2 (Project**
23 **17.2)?**

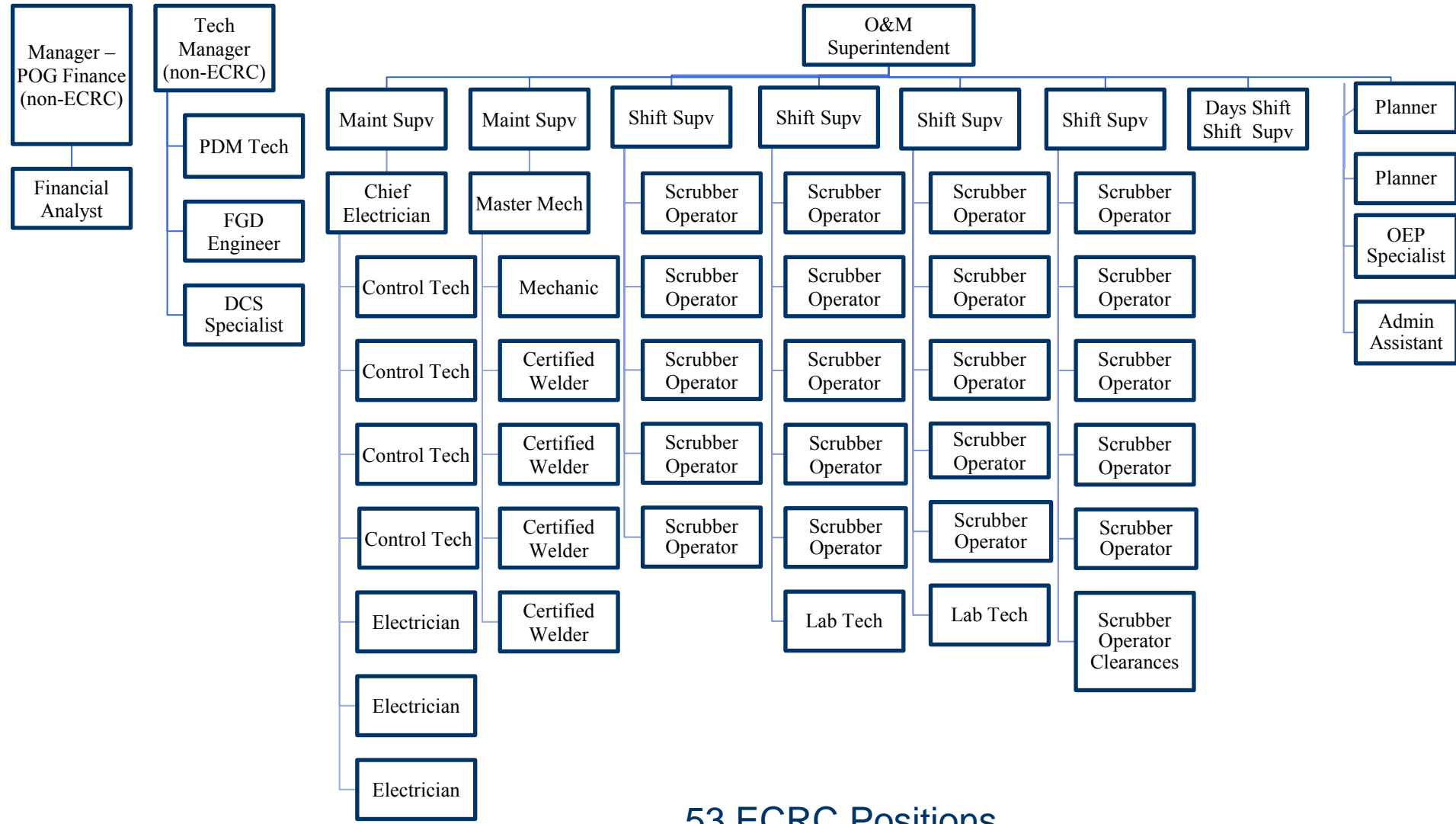
1 A. DEF estimates O&M costs of approximately \$1.1 million for CR1&2 MATS
2 compliance. These costs are to perform alternative coal trials to demonstrate
3 DEF's ability to safely and reliably use alternative coal at CR1&2 to comply
4 with MATS beyond the 2015 compliance date provided in the rule. These costs
5 are subject to change as the Company continues to explore options to reduce
6 emissions into the ranges required for MATS compliance.

7
8 **Q. What is the current status of the alternative coal trials?**

9 A. DEF performed initial fuel tests in June 2013 that demonstrated stable plant
10 operations with alternative lower constituent coal. Additional analysis and
11 testing is planned to further explore the options available to DEF to reduce
12 emissions into the ranges required for MATS compliance. These costs are
13 subject to change as the Company continues to explore options to reduce
14 emissions into the ranges required for MATS compliance. If DEF moves
15 forward with alternative coal as the MATS compliance strategy, it will need to
16 incur some capital costs to make changes to CR1&2 so that the units can
17 successfully burn the coal. Depending on the engineering results, such costs
18 may be incurred in the 2014 timeframe. However, given that the engineering
19 analysis has not been completed, DEF has not included any capital costs for this
20 project at this time.

21
22 **Q. Does this conclude your testimony?**

23 A. Yes.



53 ECRC Positions