

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

In re: Petition for Determination)
of Need of Hines Unit 3 Power)
Plant)
_____)

DOCKET NO. 020953-EI

Submitted for filing: September 4, 2008

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DIRECT TESTIMONY
OF JOHN J. HUNTER

ON BEHALF OF
FLORIDA POWER CORPORATION

JAMES A. MCGEE
Associate General Counsel
PROGRESS ENERGY SERVICE
COMPANY, LLC
100 Central Avenue
St. Petersburg, Florida 33701
Telephone: (727) 820-5184
Facsimile: (727) 820-5519

GARY L. SASSO
Florida Bar No. 622575
JILL H. BOWMAN
Florida Bar No. 057304
W. DOUGLAS HALL
Florida Bar No. 347906
CARLTON FIELDS, P.A.
Post Office Box 2861
St. Petersburg, FL 33731
Telephone: (727) 821-7000
Telecopier: (727) 822-3768

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IN RE: PETITION FOR DETERMINATION OF NEED

BY FLORIDA POWER CORPORATION

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DIRECT TESTIMONY OF JOHN J. HUNTER

I. INTRODUCTION AND QUALIFICATIONS.

1 **Q. Please state your name, employer, and business address.**

2 **A.** My name is John J. Hunter and I am employed by Florida Power Corporation
3 (Florida Power or Company). My business address is One Power Plaza, 263 13th
4 Avenue South, St. Petersburg, Florida 33733.

5
6 **Q. Please state your position with the Company and describe your duties and
7 responsibilities in that position.**

8 **A.** I am employed by Florida Power as a Lead Environmental Specialist in the
9 Environmental Services Section of the Technical Services Department. As a Lead
10 Environmental Specialist, my primary responsibilities currently include oversight
11 and support of air quality related issues for most of Florida Power's generating
12 facilities.

13 This includes activities related to obtaining and maintaining necessary air
14 permits for the facilities, developing and/or overseeing regulatory compliance
15 reporting, and interfacing with federal, state, and local environmental regulatory

1 agencies. I am also currently acting as the Environmental Project Manager for all
2 environmental siting, licensing, and permitting activities related to the addition of
3 generating capacity to the Florida Power system. In addition to the above, I am
4 currently serving as the Chair of the Florida Electric Power Coordinating Group's
5 (FCG) Environmental Air Subcommittee.

6
7 **Q. Please summarize your educational background and work experience.**

8 **A.** I earned a Bachelor of Science degree in Chemical Engineering from the
9 University of South Florida. Prior to coming to Florida Power in 2001, I was
10 employed for 14 years by Tampa Electric Company (TECO). I held various
11 engineering and supervisory positions within TECO's Environmental Affairs
12 Department, including Administrator of Water Programs (1995-1998) and
13 Administrator of Air Programs (1998-2000). In these various positions, I was
14 responsible for ongoing environmental permitting and compliance activities for
15 existing generating facilities, and I was involved in studies for the siting of new
16 generation.

17 In 2001, I joined Florida Power, and my responsibilities largely consist of
18 those previously outlined. More specifically, as it relates to this testimony, I am
19 responsible for obtaining the supplemental site certification for Hines Unit 3 at the
20 Hines Energy Complex (HEC). This includes overall management of the project,
21 providing technical resources, overseeing all aspects of the application
22 preparation, handling responses to comments, meeting with regulatory agency

1 managers, and ensuring that the certification project is completed on schedule and
2 within budget.

3
4 **II. PURPOSE AND SUMMARY OF TESTIMONY.**

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

7 A. I am testifying on behalf of Florida Power in support of its Petition for a
8 Determination of Need to (1) describe the HEC site, (2) discuss the environmental
9 benefits of the HEC site and the Hines 3 unit that Florida Power proposes to build,
10 and (3) discuss the environmental approval process associated with the
11 construction and operation of Hines 3.

12 I am responsible for preparation and submittal of the Supplemental Site
13 Certification Application (SCA) for the proposed Hines 3 unit, which includes the
14 application for Prevention of Significant Deterioration (PSD) approval, obtaining
15 the Florida Department of Environmental Protection (DEP) approval of the PSD
16 application, negotiating Conditions of Certification with the participating
17 regulatory agencies, and obtaining certification approval from the Governor and
18 Cabinet sitting as the Siting Board.

19
20 **Q. Are you sponsoring any sections of Florida Power's Need Study?**

21 A. Yes, I am sponsoring "Environmental Considerations" in Section II of the Need
22 Study.

23

1 **Q. Please summarize your testimony.**

2 **A.** I am responsible for preparation and submittal of the Supplemental SCA for the
3 proposed Hines 3 power unit. The Hines 3 unit will be a state-of-the-art gas-fired,
4 combined cycle power unit that will be located at the HEC.

5 The HEC continues to represent a beneficial reuse of an environmentally
6 impacted mined-out phosphate area and was specifically selected as a power plant
7 site because of its minimal environmental impact. Site certification evaluations
8 included assessments of air quality impacts, water quality and wildlife impacts,
9 water use and noise impacts, socioeconomic impacts and benefits, traffic impacts
10 from construction and operation, and other impacts of the entire planned capacity
11 of 3,000 megawatts (MW).

12 Hines 3 requires only a supplemental application and review that will
13 require less time, and, as an additional benefit, it will cost less to obtain the
14 necessary environmental approvals. In the original Hines 1 proceeding, the Siting
15 Board specifically made a determination that the HEC had the ultimate site
16 capacity to support 3,000 MW of electrical generating facilities fired by either
17 natural gas or coal gasification.

18 Based on my review and analysis, it is my professional opinion that
19 certification of the Hines 3 unit should be approved by the Governor and Cabinet
20 and the PSD permit issued by DEP in a timely fashion and in accordance with all
21 applicable environmental laws and regulations to allow for its commercial
22 operation by December 2005.

23
24

1 **III. DESCRIPTION OF THE SITE AND THE PROPOSED UNIT.**

2

3 **Q. Is the HEC permitted for electric power plant usage?**

4 **A.** Yes. In 1994, the Governor and Cabinet, sitting as the Siting Board pursuant to
5 the Florida Electrical Power Plant Siting Act, granted certification to Florida
6 Power to construct and operate Hines Unit 1 and for 3,000 MW of ultimate site
7 capacity.

8 In 2001, the Siting Board approved the Supplemental SCA allowing for the
9 construction and operation of Hines Unit 2.

10 In the original proceeding, the Siting Board specifically made a
11 determination that the HEC had the ultimate site capacity to support 3,000 MW of
12 electrical generating facilities fired by either natural gas or coal gasification. The
13 original proceeding that culminated in that 1994 Certification included extensive
14 evaluations of the worst case capacity constraints and maximum potential
15 environmental effects of the operation of the expected 3,000 MW of capacity.
16 These evaluations included assessments of air quality impacts, water quality and
17 wildlife impacts, water use and noise impacts, socioeconomic impacts and
18 benefits, traffic impacts from construction and operation, and other impacts of the
19 entire planned capacity of 3,000 MW. This evaluation was undertaken, in large
20 measure, to provide assurances that the HEC has adequate air, water, and land
21 resources to accommodate additional electrical generating units like those
22 proposed in the current Supplemental SCA. Confirming the Polk County Board
23 of County Commissioners' finding, the Siting Board also concluded that the HEC

1 was consistent, and in compliance, with the land use plans and zoning
2 requirements of Polk County.

3 After receiving the Certification, Florida Power constructed the 500 MW
4 (nominal) Hines 1 unit. Hines 1 began commercial operation in April 1999.
5 Under a previous Supplemental SCA process and approval, the 530 MW
6 (nominal) Hines 2 unit is currently under construction and is expected to begin
7 commercial operation in December 2003.

8

9 **Q. Please briefly describe the proposed unit.**

10 A. The Hines 3 power block will be a state-of-the-art gas-fired, combined cycle
11 power unit with an expected winter capacity rating of 582 MW. Florida Power
12 will build the unit at the HEC. The Company proposes to place the unit into
13 commercial operation in December 2005. Low sulfur (0.05 percent) distillate oil
14 capability is available using the existing oil storage facility currently in place to
15 serve Hines 1 and 2. The unit will be a highly efficient, intermediate or baseload
16 unit.

17

18 **Q. What environmental permits are necessary for the construction and
19 operation of the proposed Hines 3 unit?**

20 A. Certification of the Supplemental SCA and the PSD permits are necessary for
21 construction and operation of Hines 3. Although the Company has previously
22 obtained Site Certification from the Florida Siting Board for an ultimate capacity
23 of 3,000 MW at the HEC and for the construction and operation of Hines 1 and 2,

1 the proposed addition of Hines 3 requires the approval of a Supplemental SCA.
2 Pursuant to the requirements of the Power Plant Siting Act and Chapter 62-17,
3 F.A.C., Florida Power has submitted a Supplemental SCA for the purpose of
4 building Hines 3. This Supplemental SCA will be reviewed by state agencies, the
5 water management district, local government, and others. After extensive review,
6 a Department of Administrative Hearings (DOAH) administrative law judge will
7 issue an order recommending approval or denial to the Governor and Cabinet,
8 sitting as the Siting Board. If approval is recommended, the DEP will also
9 recommend Conditions of Certification as part of the Siting Board's approval.
10 Ultimately the Governor and Cabinet will issue or deny Site Certification
11 considering the need for power balanced with the expected environmental
12 impacts.

13
14 **Q. What information does Florida Power's Supplemental SCA include?**

15 A. The Supplemental SCA addresses the environmental and socioeconomic aspects
16 of the additional generating unit at the HEC by presenting information on the
17 existing natural and human environments, the additional generating facilities
18 proposed to be constructed and operated, and the impacts of those additional
19 facilities on those environments. Much of the information contained in this
20 Supplemental SCA is updated information from the SCA filed in 1992 for Hines 1
21 and ultimate site certification for the HEC, as well as the Supplemental SCA for
22 Hines 2, with a focus on the environmental impacts of the construction and
23 operation of Hines 3. Similar to Hines 1 and 2, Hines 3 will consist of two

1 combustion turbines, each equipped with one heat recovery steam generator, and
2 a single steam turbine electrical generator. Existing and previously permitted
3 infrastructure, including fuel delivery and storage facilities, electrical transmission
4 facilities, potable water, wastewater treatment/disposal, and transportation
5 facilities at the HEC are adequate with some minor enhancements for the
6 operation of Hines 1, 2, and 3.

7
8 **IV. ENVIRONMENTAL BENEFITS OF THE SITE AND THE PROPOSED**
9 **UNIT.**

10
11 **Q. What environmental benefits do the HEC and the proposed unit offer?**

12 A. The HEC and proposed unit offer several environmental benefits. First, Hines 3
13 will be located at the HEC, an existing power plant site. The HEC continues to
14 represent a beneficial reuse of an environmentally-impacted, mined-out phosphate
15 area and was specifically selected as a power plant site because of its minimal
16 environmental impact. As such, there were and are no major environmental
17 limitations. Most, if not all, of the environmental thresholds associated with the
18 site were resolved when Hines 1 was certified. Accordingly, Hines 3 requires
19 only a supplemental application and review that will require less time, and, as an
20 additional benefit, it will cost less to obtain the necessary environmental
21 approvals.

22 Because the Florida Siting Board approved the HEC for up to 3,000 MW
23 and given that the Company previously developed the property for the Hines 1

1 and 2 units, little additional development is necessary for Hines 3. In fact, the
2 principal infrastructure is already in place, including extensive site development
3 (excavation, fill, access roads, sewer systems), a 722-acre cooling pond, and two
4 fully-sized natural gas lateral pipelines. Most other common facilities, such as the
5 site administration building including the control room, will require only minor
6 modifications. There will be some minor incremental increase in staffing. In
7 addition, all on-site distillate oil delivery, storage, and handling facilities, including
8 unloading areas, storage tank systems, and the containment tanks are in place and
9 adequate for Hines 1, 2, and 3. The existing on-site cooling pond provides
10 circulating water for cooling of the plant auxiliary systems and steam turbine
11 condensers for Hines 1, 2, and 3. Additionally, Florida Power, under its existing
12 Site Certification, is authorized to use groundwater for makeup cooling water
13 beginning with Hines 3.

14 The HEC's large size also provides a substantial buffering of the proposed
15 plant, which minimizes environmental and socioeconomic impacts. The HEC is
16 located in a low population density area, not close to any residential areas, and is
17 zoned to accommodate electrical power plants.

18 County Road 555 provides vehicular access, with rail access provided by
19 existing CSX rail lines, including an on-site rail spur. Florida Power completed a
20 traffic impact analysis to assess traffic impacts for the construction and operation of
21 the full build-out of the HEC (3,000 MW) on Polk County roadways. Conditions of
22 Certification addressing those impacts were included in the 1994 Certification. Area

1 roadways have capacity to accommodate traffic from construction and operation of
2 Hines 3 as previously demonstrated.

3 The existing Certification also minimizes potential impacts on water and
4 air quality. Under the terms of the original Site Certification, the facility is
5 designed for zero discharge of industrial wastewater to off-site surface waters.
6 Process wastewater streams are treated on-site and are used as makeup for the
7 cooling pond. The major consumption and/or loss of water occur through
8 evaporation from the cooling pond.

9 Air emission control will be achieved using the best available control
10 technology. Selective catalytic reduction (SCR) technology will be used to control
11 nitrogen oxide (NO_x) emission levels while firing natural gas. When firing distillate
12 oil, water injection along with SCR will be used to limit NO_x levels. The
13 combustion of natural gas and low sulfur oil fuels in conjunction with good
14 combustion practices to ensure complete combustion will minimize sulfur dioxide
15 (SO₂) and particulate matter emissions. These technologies will ensure compliance
16 with applicable air quality standards.

17 Finally, noise impacts from the full 3,000 MW site were assessed for several
18 residential receptors around the HEC as part of the 1994 Certification. Fractional
19 noise increases observed at any nearby residential receptor will not be noticeable or
20 significant. The isolated location and buffer area around the HEC results in the lack
21 of a significant noise impact.

22

23 **Q. What is the licensing schedule for the Hines 3 unit?**

1 A. Florida Power filed the Supplemental SCA with the DEP on September 4, 2002.
2 That will allow for the commencement of commercial operations by December
3 2005.

4
5 **V. CONCLUSION.**

6
7 **Q. What is your opinion regarding the Company's ability to obtain all necessary**
8 **licenses to allow for commercial operation by December 2005?**

9 A. Based on my review and analysis, it is my professional opinion that certification
10 of the Hines 3 unit should be approved by the Governor and Cabinet and the PSD
11 permit issued by DEP in a timely fashion and in accordance with all applicable
12 environmental laws and regulations.

13
14 **Q. Are you aware of any reason why the Hines 3 unit would not be successfully**
15 **approved?**

16 A. No.

17
18 **Q. Does this conclude your direct testimony?**

19 A. Yes.