

Levy Nuclear Plant Units 1 and 2 Florida Site Certification Application

1.0 INTRODUCTION, GENERAL INFORMATION, INFORMATION REQUIREMENTS

1.1 INTRODUCTION

Florida Power Corporation doing business as Progress Energy Florida, Inc. (PEF) proposes to build and operate a nuclear powered electric generating facility in Levy County, Florida. The plant, to be known as the Levy Nuclear Plant, will use state-of-the-art technology that will include two 1000 megawatt (MW) (nominal capacity) generating units provided by Westinghouse Electric Company, LLC (Westinghouse). The reactor design, which has received an official design certification from the U.S. Nuclear Regulatory Commission (NRC) through a formal rulemaking process, is referred to as the Westinghouse AP1000 Reactor (AP1000). The location of the proposed Levy Nuclear Plant Units 1 and 2 (LNP) is illustrated on SCA Figure 1.1-1.

The Florida Power Plant Siting Act (PPSA) mandates a site certification process for obtaining a single site-related license that will include all state, regional, and local requirements for construction and operation of an energy facility of the type and magnitude being proposed by PEF. PEF has prepared this Site Certification Application (SCA) to satisfy Florida PPSA regulations.

The LNP will generate electricity using nuclear power and is subject to the construction and operation approval rules and regulations of the NRC. As part of the federal permitting process for nuclear power plants, PEF has prepared a Combined License Application (COLA) for submittal to the NRC. Major components of the COLA for the LNP include the following two comprehensive documents:

Environmental Report (ER) – The ER addresses *environmental* issues associated with construction and operation of the LNP at the proposed site in Levy County.

Final Safety Analysis Report (FSAR) – The FSAR addresses *safety* related issues associated with the construction and operation of the LNP at the proposed site in Levy County.

As part of PEF's preparation of the COLA for the LNP, a comprehensive assessment of the environmental impacts attributable to facility construction and operation has been developed and thoroughly documented. In general, the LNP ER prepared for submittal to NRC is responsive to, and in many cases, exceeds the guidance requirements provided by the State of Florida for the site certification process. Given the comprehensive nature of the LNP ER, it is being incorporated as a primary reference document for this SCA to address the State's guidance requirements and is included in the application as Appendix 10.11. However, the ER contains information beyond the State's requirements and those portions of the ER are not to be considered a part of this SCA.

Levy Nuclear Plant Units 1 and 2 Florida Site Certification Application

1.2 GENERAL INFORMATION

1.2.1 FORMAT OF THE SCA

Rule 62-17.051(1)(b), Florida Administrative Code (F.A.C.), states that an applicant may substitute the NRC format for an application for a nuclear power plant in lieu of the Florida Department of Environmental Protection's (FDEP's) format. The LNP ER is extensive and thorough, and it provides, in many cases, much more detailed information than would normally be requested by the FDEP for inclusion in the SCA and addresses issues beyond the State's purview. The ER is being included as an appendix to the SCA (SCA Appendix 10.11) and is the primary reference document for the applicable portions of this application. As such, this SCA has been written in an abbreviated format that serves as a cross-walk, referring the reader to specific sections of the ER that address the requirements of FDEP's June 27, 2007 Draft Guidelines for Electrical Power Plants, Associated Facilities, and Electrical Transmission Lines. Where the SCA Draft Guidelines request information that is not available in the ER, that information is provided in the appropriate sections of the SCA following any relevant references to the ER. The SCA is therefore a relatively concise document that provides a "road map" to the relevant portions of the ER, while following the specific outline of the SCA Draft Guidelines, as issued on June 27, 2007.

1.2.2 COORDINATION

Coordination with the FDEP and other Florida agencies has been conducted, as appropriate and practical, and will continue as the SCA is processed. Information regarding agency interactions is provided in Appendix 10.1.

1.2.3 REVIEW

PEF will follow the State of Florida's procedures for reviewing and processing submitted electrical power plant and transmission line applications, as outlined in Sections 403.501 through 403.539, Florida Statutes (F.S.), and the FDEP's companion rule in Chapter 62-17, F.A.C.

1.2.4 STATE-OWNED LANDS

PEF desires to use or cross certain state-owned lands or other lands owned by governmental agencies. The appropriate government agencies will be contacted at the earliest possible date regarding the use of public properties. State-owned lands and other publicly owned lands are addressed in **ER Section 2.2.3.4**.

1.2.5 ULTIMATE CAPACITY CERTIFICATION

No ultimate site capacity beyond that identified in this application is being requested.

**Levy Nuclear Plant Units 1 and 2
Florida Site Certification Application**

1.2.6 APPENDICES

The appendices recommended by the SCA Draft Guidelines are included in Chapter 10. Included in the appendices are copies of the federal permit applications, as well as technical documents and information used to support various sections of the SCA. Also included is the ER prepared for submittal to NRC. In many cases, the information provided in the ER exceeds the guidance requirements provided by the State of Florida for the site certification process. Those portions of the ER containing information beyond the State's requirements are not to be considered a part of this SCA.

1.3 INFORMATION REQUIREMENTS

1.3.1 APPLICANT IDENTIFICATION

Applicant's Official Name:	Florida Power Corporation dba Progress Energy Florida, Inc.
Address:	299 First Avenue North St. Petersburg, FL 33701
Address of Official Headquarters:	299 First Avenue North St. Petersburg, FL 33701
Business Entity (corporation, partnership, cooperative):	Corporation
Name and Title of Chief Executive Officer:	Mr. Jeffery Lyash President and CEO
Name, Address, and Phone Number of Representative responsible for obtaining certification:	Mr. John (Jamie) Hunter PO Box 14042 St. Petersburg, FL 33733 (727) 820-5764
Site Location (County):	Levy County
Nearest Incorporated City:	Inglis, Florida
Latitude and Longitude (power block midpoint):	Latitude 29/4/24.95 Longitude 82/37/14.80
UTMs (power block midpoint):	3217.2 N (kilometers [km]) (Zone 17) 342.2 E (km)
Section, Township, Range:	Sections 7, 17, 18, 19, 20, 29, 30 Township 16 S Range 17 E

**Levy Nuclear Plant Units 1 and 2
Florida Site Certification Application**

Location of Directly Associated Facilities (Counties):

Makeup and Blowdown Pipeline and Intake Structure: Railroad Spur:	Approximately 13 mi. Levy and Citrus Counties, Florida Approximately 11 mi. Levy and Marion Counties, Florida
Heavy Haul Road:	Approximately 4 mi. Levy County

Electrical Transmission Lines:

Corridor Locations (counties crossed):	Levy, Citrus, Marion, Sumter Hernando, Pinellas, Hillsborough, and Polk
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Incorporated Cities within the Corridor (names):	Inglis, Wildwood, Leesburg, Oldsmar Plant City, and Tampa
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Termination Points:	Levy Nuclear Plant Proposed Citrus Substation Proposed Central Florida South Substation Crystal River Energy Complex Switchyard Crystal River East Substation Brookridge Substation Brooksville West Substation Kathleen Substation Lake Tarpon Substation 69 kilovolt (kV) transmission line near US 19 69 kV transmission line near Bypass Canal
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Intermediate Substation(s):	Holder Substation Ross Prairie Substation Anderson Substation Griffin Substation
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Name Plate Generating Capacity and Ultimate Site Capacity (where applicable):	Two 1154 MWe (nominal electrical) each
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Additional Information on any power plant associated facility (natural gas lines; reclaimed water lines; roads; transmission line type, voltage, number of circuits):

Electrical Transmission Lines:

Voltage:

- LNP to Citrus Substation: 500 kV (7 miles [mi.] in length/two circuits)
- LNP to Central Florida South Substation: 500 kV (59 mi., one circuit)

**Levy Nuclear Plant Units 1 and 2
Florida Site Certification Application**

- LNP to Crystal River Energy Complex (CREC) Switchyard: 500 kV (14 mi., one circuit)
- Proposed Citrus Substation to Crystal River East Substation: 230 kV (2.7 mi., two circuits)
- CREC Switchyard to Brookridge Substation: 230 kV (38 mi., one circuit)
- Brookridge Substation to Brooksville West Substation: 230 kV (3 mi., one circuit)
- Kathleen Substation to Lake Tarpon Substation: 230 kV (50 mi., one circuit)
- North (375 feet [ft.], one circuit); South (4.5 mi., one circuit); Construction/Administration: 69 kV

Line Type (AC or DC): AC

Length of line and number of circuits: See above information for approximate lengths.

1.3.2 INFORMATION SOURCES

PEF used information obtained from state, federal, local and regional governmental agencies, educational institutions, publications, and qualified consultants during the preparation of this SCA and the LNP ER (see SCA Appendix 10.11). Published information used as supporting data is concisely summarized and documented by reference to the original data sources. Commonly available information and material is cited in the application and its content described briefly. Concise descriptive or narrative text, as well as, tables, maps, charts, graphs, are used to support information presentations and discussions.

1.3.3 UPDATES TO THE APPLICATION

Any updates to the application will be submitted in a manner that will clearly show both the original and revised language. In the case of an updated map or aerial photograph, the submittal will be marked "revised," with the date of the map or photograph marked on it and the date of the submittal indicated. Newly submitted information will be in a format that can be readily inserted and collated into the original application. Electronic copies of updates will also be provided.

**Levy Nuclear Plant Units 1 and 2
Florida Site Certification Application**

1.3.4 WORST CASE ANALYSIS

Based on the extensive data and information used to prepare the LNP ER and this SCA, the proposed facility design is sufficiently conservative that a worst case analysis is not warranted.

1.3.5 DATA GATHERING AND MONITORING

PEF has conducted numerous field studies and performed extensive data/information acquisition during the course of the development of the ER and the SCA. Future monitoring efforts for a variety of environmental and other media are anticipated as conditions of the site certification that will be issued by the State of Florida, the COL that will be issued by the NRC, and various federal permits. Any such future monitoring programs and activities will necessarily be designed to use methods that are duly adopted, published, or otherwise approved by the FDEP and NRC. Protocols and plans for these future monitoring programs and activities will be submitted, as required, to the FDEP prior to implementation. Construction monitoring proposals are included in this application and discussed in more detail in the appropriate SCA sections.

1.3.6 MAPS AND DRAWINGS

Maps and drawings with suitable scales are included in the SCA and ER, with the scales indicated on each map and drawing. PEF verifies that data contained in any maps, drawings, and aerial photographs are representative of the area and either current within 6 months of filing or the best that are reasonably available. All aerial photographs are intended to be legible reproductions obtained from a variety of sources.

1.3.7 VARIANCES

PEF has made a determined effort to assure that requested variances from established environmental standards are kept to the minimum extent practical. Each anticipated variance from applicable state and local standards that is sought as part of the state certification proceedings for an operation-related impact is shown in the applicable SCA section and with the code section number for the standard. Variances sought separately from federal standards or guidelines in any federal permit application for this project state the nature of the variance, the reasons for seeking the variance, anticipated renewal periods, and the facts that show a variance should be granted. These variances, if requested, are listed in the respective federal permit applications in SCA Appendices.