FROM:

Florida Power Corporation
St. Petersburg, Fla. 33733
(A. Perez & J. T. Rodgers)

DATE OF DOCUMENT: 8-10-67

DATE RECEIVED 8-10-67

NO.: 2639

LTR. MEMO: REPORT: OTHER: Report

TO:

DRL (hand-delivered 8-10-67 at 9:45 a.m.)

ORIG.: CC: OTHER:

3 signed & 19 conf'd (NOTARIZED 8-9-67)

ACTION NECESSARY ☐ CONCURRENCE ☐ DATE ANSWERED:
NO ACTION NECESSARY ☐ COMMENT ☐ BY:

CLASSIF.: U

POST OFFICE

REG. NO:

FILE CODE: DOCKETS: 50-302 and -303 (new)

DESCRIPTION: (Must Be Unclassified)

The following filed by Florida Power:

APPL. for LICENSES, notarized 8-9-67, (containing 50.33 info) applying for construction permit, operating license, et al, to cover a two-unit nuclear generating plant to be known as Crystal Units 3 & 4, located in Citrus County, Fla... (Includes: Exhibits 1 thru 7 also) (3 signed & 19 conformed cys. rec'd)

VOLUMES 1, 2, 3 & 4 to "Preliminary Safety Analysis Report (100 cys. each rec'd)

ENCLOSURES:

REMARKS:

Distribution: 1-formal file (ticket only to 50-303)
1-suppl. file (" " " ")
18-ACRS (3 of Appl)
8-Hearing (4 of Appl)
1-AEC PDR 2-compliance
1-OGC

REFERRED TO	DATE	RECEIVED BY	DATE
Boyd: 8-10 w/4 Appl. & 8 Vol. -- FOR ASSIGNMENT AND ACTION			
See Rpts file			
Info Copies to:			
Dr. Morris		Page	
Boyd		Rosen(w/out Appl	
Levine w/out Appl.		V. Moore "	
Dube/Skovholt		DeYoung "	
H. Price & Staff		Newell "	

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50 - 302
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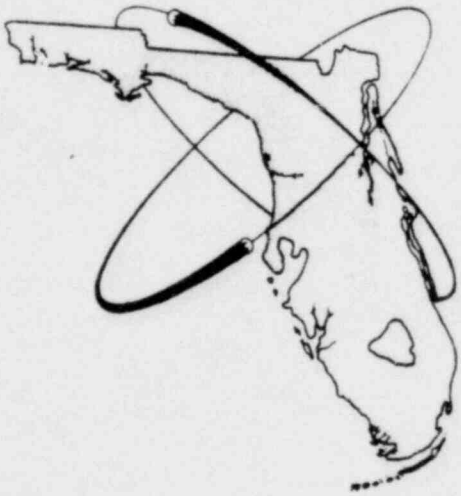
Regulatory Suppl File Cy.

Crystal River Units 3 & 4 Nuclear Generating Plant



APPLICATION FOR LICENSES

The Power To Please!

FLORIDA POWER CORPORATION

DOCKETED USAEC AUG 10 1967 REGULATORY MAIL SECTION DOCKET CLERK

REGULATORY DOCKET FILE COPY

See Reports Section for Original

2529

BEFORE THE

UNITED STATES ATOMIC ENERGY COMMISSION

DOCKETS NOS. 50-302 and 50-303

In the Matter of

FLORIDA POWER CORPORATION

APPLICATION FOR LICENSES

UNDER THE ATOMIC ENERGY ACT OF 1954

AS AMENDED

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for

CRYSTAL RIVER UNITS 3 & 4
NUCLEAR GENERATING PLANT

DATE: August 10, 1967

Before the

UNITED STATES ATOMIC ENERGY COMMISSION

Dockets Nos. 50-302 and 50-303

In the Matter of

FLORIDA POWER CORPORATION

APPLICATION FOR LICENSES

Florida Power Corporation (hereinafter sometimes referred to as "Applicant") hereby makes application pursuant to the provisions of the Atomic Energy Act of 1954, as amended, and the Atomic Energy Commission's Rules and Regulations thereunder, for the necessary licenses (including a construction permit) to construct, own, use and operate a nuclear electric generating plant to be located in Citrus County, Florida, and to be known as Crystal River Units 3 & 4 Nuclear Generating Plant (hereinafter called "Facilities"), as an integral part of its total operating system.

This application has been combined for two proposed generating units pursuant to the provisions of 10 CFR § 50.31. It consists of the following two parts: (a) The general information required by 10 CFR § 50.33, which is set out herein; and (b) the technical information and safety analysis report required by 10 CFR § 50.34, which is set out in a separate document entitled "Crystal River Units 3 & 4 Nuclear Generating Plant, Preliminary Safety Analysis Report," forwarded herewith and made a part hereof.

GENERAL INFORMATION

(a) Name of applicant

Florida Power Corporation
Incorporated, organized and operating under the Laws of Florida.

(b) Address of applicant

101 Fifth Street South
P. O. Box 14042
St. Petersburg, Florida 33733

(c) Description of business or occupation of applicant

Applicant is an operating public utility engaged exclusively in the production, transmission, distribution and sale of electricity in the general service area indicated on the service area map, which is attached hereto as Exhibit 1. The Business and Property of the Applicant is described on pages 5 and 7 of a Prospectus dated July 27, 1967, filed with the Securities and Exchange Commission, File No. 2-26766, in connection with the Applicant's issuance of First Mortgage Bonds, which is included under Tab 1 - Financial Statements as Exhibit 2.

Applicant's operating revenues for 1966 totalled $111,672,922, of which 48.7% was derived from residential sales, 28.0% from industrial sales, 12.8% from commercial sales and 10.5% from other sources. In the five-year period ended December 31, 1966, Applicant experienced a growth in annual gross revenues of 49.9%. The average KWH sales per residential customer increased from 4,704 KWH to 6,597 KWH during this period.

Applicant is presently constructing Crystal River Unit 2 which will be a coal-burning plant with a capability of 510,000 KW at an estimated cost of $36,665,000. It is expected that this Unit will go into service in

December 1969. With completion of Crystal River Unit 2, the total installed generating capacity of Florida Power Corporation will be in excess of 2,000,000 KW.

Applicant has interchange arrangements with the power companies adjacent to its service area. These include arrangements with the Southern Company, Tampa Electric Company, Florida Power and Light Company and Orlando Utilities Commission.

(d) Organization and Management of Applicant

Applicant is a corporation organized and existing under the laws of the State of Florida and its principal office is located in St. Petersburg, Florida, at the address stated above.

All of the Applicant's principal officers and directors are citizens of the United States. Their names and addresses are as follows:

DIRECTORS & OFFICER-DIRECTORS

Name	Address
W. J. Clapp - President	St. Petersburg, Fla.
E. H. Dunn, Jr. - Vice President & General Counsel	St. Petersburg, Fla.
G. F. Foley - Sr. Vice President, Secretary & Treasurer	St. Petersburg, Fla.
J. S. Gracy - Sr. Vice President	St. Petersburg, Fla.
Byron E. Herlong	Leesburg, Fla.
George W. Jenkins	Lakeland, Fla.
Robert M. King	St. Petersburg, Fla.
A. P. Perez - Vice President	St. Petersburg, Fla.
Paul F. Randolph	Clearwater, Fla.

DIRECTORS & OFFICER-DIRECTORS (Cont'd)

Name	Address
R. H. Simpson	Monticello, Fla.
Harry M. Smith	Winter Garden, Fla.

Applicant is not owned, controlled or dominated by any alien, any foreign corporation, or any foreign government. It is making this application in its own behalf and not as agent or representative of any other person.

(e) Class and Period of License Applied for and Use to Which Facilities will be put

The license hereby applied for is a class 104(b) construction permit and operating license for said Facilities as defined by 10 CFR § 50.21. It is requested that the term of the license be for period of forty (40) years. Applicant further requests such additional source, special nuclear, and by-product material licenses as may be necessary or appropriate to the acquisition, construction, possession and operation of the licensed facilities. The Babcock & Wilcox Company will supply fabrication for the first fuel cores. The enriched uranium UF_6 for the first core on Unit 3 will be leased from the AEC.

The Facilities will be additions to an existing 2 unit coal-fueled plant consisting of a 387 MW unit and a 510 MW unit. The facility will include two pressurized water reactors. Applicant plans for each unit to be capable of an ultimate output of 2560 MWt (including 16 MW contribution from reactor coolant pumps) corresponding to a gross electrical capability of about 885 MW. At the time Unit 3 goes into service in April 1972 it will

represent 29% of our total gross generating capability of 2,999,000 KW including Unit 3 and assuming no retirements of facility.

At the time a Unit 4 would go into service in the Company's System in 1974 it will represent 20% of our total gross generating capability of 3,884,000 KW including such Unit 4 and assuming no retirements of facility.

All physics and core thermal hydraulics information in the attached Preliminary Safety Analysis Report is based upon the reference core design of 2544 MWt. Site parameters, principal structures, engineered safeguards, and the hypothetical accidents evaluated are for the expected ultimate output of 2544 MWt from the nuclear steam supply system.

(f) Financial Qualifications of Applicant

Applicant estimates that the total cost of said Facilities, including the initial core for each Unit, will be approximately $279,080,000, and the total inventory cost of the first cores and spares will be approximately $49,380,000, as shown on Exhibit 3 under Tab 1 - Financial Statements.

Construction of said Facilities will be financed as an integral part of Applicant's total construction program. Initially the Applicant will obtain lines of credit from commercial banks for short-term borrowings at the prime rate, and thereafter will permanently fund by selling senior securities. Due to changing market conditions, no definite statement can be made at this time as to the type of securities which will be sold or the date of their sale. The Applicant's First Mortgage Bonds are rated Aa by Moody's and AA by Standard & Poor's. These bonds have a cash sinking fund that requires that 1 3/4% of the principal amount of each series of bonds be retired each year. Two series of these bonds totalling $14,400,000 will

mature on January 1, 1974 and will have to be refunded late in 1973. No further refunding of First Mortgage Bonds will be required until 1978. The Applicant's Convertible Debentures are rated A. It is presently anticipated that the Applicant will issue long-term debt and equity securities during this period in a manner consistent with the maintenance of desirable capitalization ratios.

Financial statements for the Applicant as of April 30, 1967 are included in Exhibit 2. Additional financial and statistical information is shown in the Applicant's Ten-Year Statistical Report 1957-1966 included under Tab 1 - Financial Statements as Exhibit 4 and 1966 Annual Report, attached hereto as Exhibit 5 under Tab 2 - Annual Report to Shareholders.

It is the Applicant's intention to lease the enriched uranium for the first core of Crystal River Unit 3 from the Atomic Energy Commission, and to assume its ownership via "in situ" purchase in mid-1973. Subsequent cores for Unit 3 and all cores for Unit 4 will be fueled with uranium purchased by the Applicant on the open market and then toll enriched.

The first core fuel for each unit will contain the following quantity, enrichment and dollar value (based on current AEC charge rates) of uranium:

Quantity Kg-U 1st Core of each unit	Enrichment Kg-U235	%	AEC Base Charges Dollar Values
20,525	470	2.29%	$ 3,637,646
25,542	674	2.64%	5,490,508
34,664	1,005	2.90%	8,435,484
80,731	2,149		$ 17,563,638

The dollar values are based on the AEC base charges as shown on the table on page 285 of "Rules and Regulations - Title 10 - Chapter I - Code of Federal Regulations - U.S.A.E.C."

Applicant will carry builders' risk insurance during the construction of said Facilities and charge these costs to construction expenditures. Applicant will also obtain all required and appropriate property and liability insurance for said Facilities and its nuclear fuel, and will advise the Commission accordingly.

(g) Technical Qualifications of Applicant

Consistent with Applicant's established practice with all of its generating station additions, design and construction of said Facilities will be managed by Applicant's personnel in its Mechanical Engineering Department. Engineering design will be performed by Gilbert Associates, Inc., Consulting Engineers, Reading, Pennsylvania. The nuclear steam supply system (including reactor, primary loops and steam generators, miscellaneous systems, instrumentation and controls, supervision of erection of the nuclear steam supply system, and supporting technical services) for each unit, as well as initial fuel fabrication, will be supplied by The Babcock & Wilcox Company.

All equipment, materials, supplies and construction services will be procured directly by Florida Power Corporation from selected suppliers and any compliance inspections will be arranged for by Florida Power Corporation.

The technical qualifications of Applicant to engage in the proposed activities are described in Exhibit 6 under Tab 3 - Technical Qualifications. Also included in Exhibit 6 are the technical qualifications of

The Babcock & Wilcox Company, supplier of the Nuclear Steam Supply System and initial fuel fabrication, and of Gilbert Associates, Inc., serving as Applicant's architect-engineer.

(h) Completion Dates

Construction of Unit 3 is scheduled for completion in time for fuel loading to begin December 1, 1971, for earliest commercial operation by April 1, 1972, and latest commercial operation 1/ October 1, 1972. To meet this schedule, construction of Unit 3 is to begin June 1, 1968 and is to be completed by March 1, 1972. Present plans provide for Unit 4 construction and completion 2 years later.

(i) Restricted Data

An agreement limiting access to Restricted Data as required by 10 CFR § 50.37 is attached hereto as Exhibit 7 under Tab 4 - Agreement - Restricted Data. This application in the form submitted does not contain Restricted Data or other defense information.

It is requested that all communications pertaining to this application be sent to:

A. P. PEREZ, Vice President
and
J. T. RODGERS, Nuclear Project Manager

Florida Power Corporation
101 Fifth Street South
St. Petersburg, Florida 33701

IN WITNESS WHEREOF, Florida Power Corporation has caused its name to be hereunto signed by A. P. Perez, its Vice President, and J. T. Rodgers, its Nuclear Project Manager, and its corporate seal to be hereto affixed by G. F. Foley, its Secretary, this 9th day of August, 1967.

FLORIDA POWER CORPORATION

(CORPORATE SEAL)

By A. P. Perez
Vice President

ATTEST:

Secretary

By J. T. Rodgers
Nuclear Project Manager

STATE OF FLORIDA)
) SS.
COUNTY OF PINELLAS)

A. P. Perez, being duly sworn, states that he is Vice President of Florida Power Corporation; that he is authorized on the part of said Company to sign and file with the Atomic Energy Commission this application and exhibits attached thereto; that he has read all of the statements contained in such application and the exhibits attached thereto and made a part thereof; and that all such statements made and matters set forth therein are true and correct to the best of his knowledge, information and belief.

A. P. Perez

A. P. Perez

Subscribed and sworn to before me, a Notary Public in and for the State and County above named, this 9th day of August, 1967.

(SEAL)

Helene R. Stoudimer

Notary Public

Notary Public, State of Florida at Large.
My Commission Expires July 9, 1970.

STATE OF FLORIDA)
) SS.
COUNTY OF PINELLAS)

J. T. Rodgers, being duly sworn, states that he is Nuclear Project Manager of Florida Power Corporation; that he is authorized on the part of said Company to sign and file with the Atomic Energy Commission this application and exhibits attached thereto; that he has read all of the statements contained in such application and the exhibits attached thereto and made a part thereof; and that all such statements made and matters set forth therein are true and correct to the best of his knowledge, information and belief.

J. T. Rodgers

Subscribed and sworn to before me, a Notary Public in and for the State and County above named, this 9th day of August, 1967.

(SEAL)

Helene E. Maxheimer
Notary Public

Notary Public, State of Florida at Large.
My Commission Expires July 9, 1970.