EXHIBIT "A"

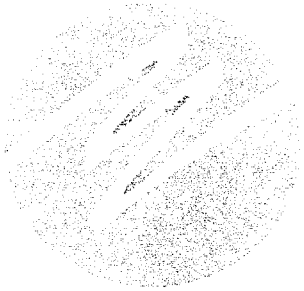
(REDACTED)

FLORIDA POWER & LIGHT COMPANY'S PETITION TO DETERMINE NEED FOR:

THE BOBWHITE-MANATEE PROJECT

DOCKET NO. 060424-EI

June 26, 2006



FPL

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

FLORIDA POWER & LIGHT COMPANY

DIRECT TESTIMONY OF

VICENTE ORDAX, JR.

DOCKET NO. 060424-EI

JUNE 26, 2006

Q. Please state your name and business address.

A. My name is Vicente Ordax, Jr. My business address is 4200 West Flagler Street, Miami, FL 33134.

Q. By whom are you employed and what is your position?

A. I am employed by Florida Power & Light Company (FPL) as Supervisor of Local Area Transmission Planning.

Q. Please describe your duties and responsibilities in that position.

A. My responsibilities include the direct supervision of electrical engineers in the development and evaluation of transmission expansion plans utilizing load flow analyses. I have held this position and performed these responsibilities since September of 2001.

Q. Please describe your professional work experience and educational background prior to your present position.

A. Prior to my present position, I worked as a transmission planning engineer at FPL from 1993 through August 2001 in the area of Bulk Transmission Planning. During this time my primary duties and responsibilities included participation in,

and performance of, FPL bulk transmission studies, joint transmission studies with neighboring utilities, the evaluation of the transmission requirements of alternative future power plant proposals, and stability analysis related to the interconnection of Independent Power Producers. In addition, I was responsible for performing part of the transmission assessments assigned to the Transmission Working Group of the Florida Reliability Coordinating Council (FRCC).

From 1986 through 1993 I worked in FPL's Protection and Control group as a field engineer primarily responsible for installing, calibrating and maintaining protective relays. I also worked in FPL's Operations Engineering group. My primary responsibilities in the Operations Engineering group included issuing transformer tap settings, optimizing generator step-up and auxiliary transformer tap settings as well as performing many day to day transmission studies related to transmission clearances and detailed local area transmission assessment studies that would aid the Transmission System Operator.

I graduated with honors from the University of Florida with a Bachelor of Science degree in Electrical Engineering in August of 1986. I received a Master of Science degree in Electrical Engineering from Florida International University in August of 1990. I am a registered professional engineer in the state of Florida since 1991. I have also attended seminars and short courses covering topics related to transmission planning.

Q. Are you a member of any professional organizations?

A. Yes, I am a member of the Institute of Electrical and Electronics Engineers and of the Power Engineering Society.

Q. Are you sponsoring any portion of the Petition?

A. Yes. I am sponsoring Exhibit "A" to FPL's Petition for Determination of Need for the Bobwhite-Manatee Project (BMP or Project) filed with this Commission concurrently with my testimony.

Q. Was this exhibit prepared by you or under your direction and supervision?

A. Yes.

Q. Please describe the purpose and scope of your testimony.

A. The purpose of my testimony is to sponsor and support FPL's Petition for a Determination of the Need for the Project. My testimony, as well as Exhibit "A" to the Petition, present the following information in support of the Project:

1. A general description of the existing load and electric characteristics of FPL's electrical transmission grid;
2. A general description of the Project including the design and operating voltage of the proposed transmission line, the starting and ending points of the line, the approximate cost of the Project and the projected in service date;
3. The specific conditions, contingencies and factors which demonstrate the need for the Project including a discussion of FPL's transmission planning process and the reliability benefits of the Project;
4. The major alternatives to the Project that were evaluated and rejected by FPL in favor of the Project; and

5. The adverse consequences to FPL's electric system and customers if the Project is delayed or denied.

Q. Describe the organization of your testimony.

A. First, I will provide an overview of FPL and the existing load characteristics and composition of FPL's transmission network. Second, I will describe the Project, the need for and benefits associated with the Project, and the estimated capital cost of the Project. Third, I will explain FPL's transmission planning process. Fourth, I will discuss the evaluation and analyses conducted to demonstrate the need for and benefits of the Project. Fifth, I will discuss the alternatives considered and explain why they were rejected in favor of the Project. Finally, I will address the adverse consequences to FPL's customers if the Project is denied or not timely approved.

OVERVIEW OF FPL

Q. Please provide a brief description of FPL.

A. FPL provides electric service to more than 4.4 million customers in 35 Florida counties. In approximate terms, FPL's service territory includes most of the east coast of Florida beginning in Miami-Dade County in southeast Florida and running north to Nassau County in northeast Florida, as well as a large portion of southwest Florida beginning in Collier County and running north through Manatee County.

Q. Please provide a general description of the existing load and electric characteristics of FPL's electrical transmission grid.

A. FPL's existing load characteristics consist primarily of residential load with limited commercial and industrial load. A listing of historic and forecasted FPL peak demand is provided in Attachment 2 of Exhibit "A". FPL's summer peak demand in 2005 was 22,361MW and the winter peak demand in 2005/06 was 19,683MW serving approximately 4.4 million customers (January 2006). An overview of FPL's existing electrical transmission network indicating the general location of generating plants, substations, and transmission lines is shown in Attachment 1 of Exhibit "A".

DESCRIPTION OF THE PROJECT

Q. Describe the proposed BMP.

A. As shown in Attachment 4 of Exhibit "A", the BMP consists of a new 230kV transmission line that will provide an additional 230kV parallel, but geographically separate, path from the existing 230kV transmission lines in Manatee and Sarasota Counties to relieve the existing transmission network. The Project also will provide electric service to three planned FPL distribution substations and one Peace River Electric Cooperative (PRECO) distribution substation located south of the existing Manatee Substation, north of the planned Bobwhite Substation and to the east of the existing transmission common Right-of-Way (ROW). This is the Project Service Area. The proposed in-service date for the BMP is December 2011.

Q. Please describe the transmission line for which FPL is seeking a determination of need in this docket.

A. The proposed transmission line will connect FPL's Manatee and proposed Bobwhite Substations. The line will be constructed with a single concrete pole design and will have a design and operating voltage of 230kV. The electrical map included as Attachment 4 of Exhibit "A" shows the electrical facilities in the Project Service Area that currently exist as well as other planned facilities in the general area (in black) and a conceptual electrical connection for the BMP (in red). The locations on the map of facilities not yet in service are approximate. In particular, the line depicting the BMP is intended to indicate conceptually an electrical connection from the Manatee Substation to the proposed Bobwhite Substation strictly from an engineering and planning perspective. The final length and routing of the line will be determined in certification proceedings under the Transmission Line Siting Act (TLSA).

Q. What is FPL's timetable for licensing, design and construction of the Project?

A. FPL presently is evaluating corridors in anticipation of submitting an application to the Florida Department of Environmental Protection under the TLSA in the winter of 2006. A final decision by the Siting Board is expected in the summer of 2007. Detailed design of the BMP will begin as soon as a final corridor is approved. Construction is expected to begin in mid 2010 and expected to be completed by December 2011.

Q. What is FPL's estimated capital cost of the Project?

A. The final route has not been selected and final costs will be subject to a number of factors including the determination of the final length and route of the line as

determined under the TLSA. Specifically, the length and route of the line, and other conditions that could be imposed through the TLSA process, will affect land acquisition costs, line construction costs, environmental permitting and mitigation costs, ROW preparation costs, and other compliance costs. Subject to these types of cost variances that could arise through the TLSA process, the estimated capital cost of the BMP is $46.9 million. The corresponding present value revenue requirement is $14.9 million.

FPL'S PLANNING PROCESS

Q. How does FPL determine the need for new transmission lines?

A. Planning for the FPL transmission system follows practices and criteria that are consistent with the North American Electric Reliability Council (NERC) and Florida Reliability Coordinating Council (FRCC) and other applicable standards. The NERC Reliability Standards, which have been adopted by the FRCC, specify transmission system operating scenarios that should be evaluated, and the attendant levels of system performance that should be attained. The NERC Reliability Standards are provided in Attachment 5 of Exhibit "A".

FPL's transmission planning process is explained in Attachment 6 of Exhibit "A". FPL conducts an annual transmission assessment of the effects of forecasted future load growth on the transmission system, the need to serve new load areas or large new customers, future interconnections with neighboring utilities, integration of new generation facilities and firm contractual transmission service

obligations. The changes in system performance due to these factors is simulated and analyzed for the present and in future years to identify existing and future system limitations. Alternative solutions to these limitations are then developed, analyzed, and screened on the basis of their electrical performance. Viable alternatives are compared for their relative merits with respect to economics, reliability, feasibility, compatibility with long range area requirements, and operating flexibility. Transmission facility additions such as a new transmission line are implemented as a result of this process when they provide the best overall solution.

Q. What studies did FPL perform to determine the need for the BMP?

A. In developing the need for the BMP, FPL conducted regional transmission assessment studies as described in Attachment 6 of Exhibit "A". These studies showed transmission limitations on the existing 230kV transmission network south of Manatee Substation and north of Ringling Substation due to projected load growth in the 2011/2012 time frame.

NEED FOR THE PROJECT

Q. Explain the need for the BMP.

A. The need for the Project is based on the following considerations:

1. The need to provide additional transmission reinforcement to the existing 230kV transmission line between Manatee and Ringling Substations in a reliable manner consistent with NERC, FRCC, and other applicable standards.

2. The need to efficiently and effectively integrate and serve new distribution substations that are needed to serve the projected load growth in the Project Service Area.

3. The need for another electrical feed from the Manatee Plant south to the Ringling area via a separate ROW path, thereby reducing the impact of a loss of the existing transmission facilities on a common ROW.

Q. Please explain the benefits of this Project.

A. The Project will provide FPL with the best overall choice of facilities necessary to maintain reliability in the existing and future areas of customer load in the Project Service Area. Specifically, the Project will allow FPL to:

1. Maintain area reliability by providing a parallel but geographically separate path to the existing Manatee – Ringling 230kV transmission network, which contains three 230kV transmission lines within a common ROW.
2. Serve new customer load along the I-75 corridor and east of the existing 230kV transmission network from the northern portion of Manatee County to the northern portion of Sarasota County.
3. Reduce transmission losses by approximately 8 MW.
4. Meet the Project Service Area's long term growth requirements for at least the next 10 years, based on the regional load forecast.

Q. Please describe the contingencies that require the addition of the BMP.

A. As outlined in Exhibit "A" of the Petition, FPL analyzed load flows for the 2011/2012 winter peak load without any new transmission facilities in service. As referenced in Attachment 9 of Exhibit "A," these analyses indicate that for 11 different single contingency events, a variety of overloads ranging from 101% to 110% of thermal MVA facility rating and low voltages to as low as 0.94 per unit (pu) can be experienced within and near the Project Service Area. The NERC Reliability Standards require that the facility ratings not exceed 100% of the applicable thermal MVA facility rating and voltage levels remain within 0.95 pu and 1.07 pu for 230kV stations. Without the Project, mitigation of these overloads would require the interruption of service of [redacted] to [redacted] customers (approximately [redacted] to [redacted] people), depending on the specific outage, in order to continue to operate the facilities in accordance with NERC Reliability Standards.

Q. How would construction of the BMP provide for further load growth as well as resolve these contingencies?

A. The BMP will provide an alternate 230kV transmission path to relieve the existing Manatee-Ringling 230kV transmission network and will also provide service to 3 new FPL distribution substations and one PRECO distribution substation. The construction of the BMP, based on a projected in-service date of December 2011, would mitigate the thermal overloads and low voltage conditions caused by single contingency events in accordance with NERC Reliability Standards and would provide service to existing and new customers at a

comparable level of reliability to that delivered to other FPL customers as the load in the Project Service Area continues to grow.

Q. Why has FPL proposed that the Project be constructed on a separate ROW?

A. As part of the planning process, FPL evaluates the loss of all transmission lines within a transmission corridor. In this case, 3 of the 5 existing 230kV transmission facilities used to serve the Project Service Area are located on a common ROW between the Manatee and Ringling Substations. The Project Service Area receives power through several transmission lines that are subject to a collective outage arising through such events as a plane crash or tornado. Placing the new circuit in a separate ROW would provide the transmission system serving the Project Service Area with another diverse path for the transmission of power.

Q. What conclusions have you reached regarding the need for a separate ROW?

A. In my opinion, the construction of the BMP on a separate ROW provides increased reliability benefits and would enhance the restoration of service to customers. Construction of the BMP on a geographically separate ROW will clearly reduce the number of customers that would lose power in the event a catastrophic event impairs the lines situated in the common ROW that serve the rapidly growing population in the Project Service Area. Moreover, the length of time a particular customer would be without power would likely be lessened since a new 230kV transmission line in a separate ROW would provide FPL with increased operational flexibility to rotate outages thereby reducing service unavailability time for customers in the Project Service Area.

Q. Are there other reliability and strategic benefits associated with the Project?

A. Yes, there is one additional benefit. The current load projections indicate that the load in the Project Service Area is expected to continue to grow, with substantial growth to the east of the existing transmission facilities in the common ROW. To serve this new load, it will be necessary to site new distribution substations to the east of the existing transmission lines. As depicted in Attachment 4 of Exhibit "A", FPL is proposing three of these substations and PRECO is proposing another. Transmission facilities will need to be rerouted and/or constructed in the future to the east of the existing common ROW in order to serve these substations. The establishment of a new ROW east of the existing common ROW provides an opportunity, subject to final ROW siting under the TLSA, for the more efficient and cost-effective integration of these new substations into FPL's transmission system to meet the expected load growth of the Project Service Area.

DISCUSSION OF ALTERNATIVES

Q. Did FPL consider alternatives to the BMP?

A. Yes.

Q. What factors were employed to evaluate the alternatives?

A. The factors used to evaluate the performance of the alternatives included reliability, cost, construction feasibility, operational flexibility, ROW diversity, and future transmission system expandability.

Q. Please describe the transmission alternatives that were considered and explain the reasons why they were rejected.

A. The following three transmission alternatives were considered:

Alternative I – This alternative consists of building a new 230kV transmission line on a new ROW from FPL's existing Manatee Substation to a proposed future Bluejay Transmission Substation located approximately 16 miles southeast of the proposed Bobwhite Substation. The portion of the route from the proposed Bobwhite Substation to the Bluejay Substation would be constructed on existing corridor looping the existing Ringling-Charlotte 230kV transmission line between Polo and Charlotte Substations. This new transmission line would provide transmission service to as many as 2 future FPL substations and one future PRECO distribution substation.

Alternative I was rejected for the following reasons:

1. This alternative would require additional upgrades to the existing transmission network (6 transmission lines/sections) at a higher cost than the BMP.

2. This alternative will not provide future transmission network flexibility, because only one 230kV transmission line exists on the Ringling-Charlotte 230kV transmission line corridor. If the existing 138kV line were to be looped into Bluejay Substation, 230/138kV transformation would be required, thereby increasing the cost of the alternative.

Alternative II – Consists of building a new 230kV transmission line from the existing Manatee Substation to the existing Howard Substation.

Alternative II was not considered a viable option because the existing Howard Substation property is completely full. It is in a residential area with no possibility for site expansion. A new 230kV line terminal could not be built at the Howard Substation. Therefore, this alternative was deemed not feasible.

Alternative III – Consists of building a new 230kV transmission line from the existing Manatee Substation to a proposed future Bobwhite Substation located within the existing common ROW and looping the existing Ringling-Laurelwood 230kV transmission lines. This new transmission line would provide transmission service to as many as 2 future FPL distribution substations from existing transmission lines within the existing ROW.

Alternative III was rejected for the following three reasons:

1. This alternative would require looping in and out from existing transmission lines located within the common ROW to the locations of FPL's future distribution substations, thereby increasing the cost of the alternative.
2. This alternative will not provide for corridor diversity. In the event of the loss of the existing corridor with three major 230kV transmission lines (and the new Bobwhite-Manatee line), the power transfer from Manatee to Ringling could be seriously jeopardized and customer outages in the Project Service Area could be required.
3. This alternative does not provide for the efficient integration of future distribution substations to the east of the existing transmission corridor, thereby increasing future costs to FPL's customers.

Q. Please describe why generation alternatives were not considered viable.

A. Generation alternatives such as siting a new generator in the Project Service Area were not considered viable for the following reasons:

1. Adding a new generator within the Project Service Area would require additional transmission facilities to interconnect and integrate the new generation above and beyond what is presently required by the proposed project at a significant increase in cost.

2. The need to provide transmission service to future proposed substations is not solved by adding generation in the Project Service Area.

Q. Please describe why distribution alternatives were not considered viable.

A. Distribution alternatives such as expanding existing substations were not considered viable because expansion of existing distribution substations will not address the primary need for this Project (i.e. reinforcement of existing Manatee-Ringling 230kV transmission network). Accordingly, a distribution alternative was not considered further.

ADVERSE CONSEQUENCES OF DELAY OR DENIAL OF THE PROJECT

Q. Would there be adverse consequences to FPL's customers in the Project Service Area if the BMP is not timely approved?

A. Yes. If the BMP is not timely approved and no other alternative is built, inadequate transmission capability would result, therefore jeopardizing reliable service to existing and future customers in the Project Service Area as discussed in Section IV of Exhibit "A". The inability to serve additional loads could lead to the implementation of rolling outages to prevent system degradation.

Q. What would be the impact if certification of the BMP were denied?

A. If certification of the BMP were denied, FPL would most likely pursue Alternative III as shown in Attachment 10 of Exhibit "A". This would result in a less reliable and more costly alternative and one that is not in the best long term interest of FPL's customers.

Q. Should the Commission approve the need for the Project?

A. Yes. The Commission should determine that there is a need for a 230kV transmission line connecting the Manatee and proposed Bobwhite Substations. The Commission should also determine that the cost and reliability benefits of the Project would be enhanced by construction of the line in a geographically separate ROW.

Q. Does this conclude your testimony?

A. Yes.