	BEFORE THE	
FLORII	A PUBLIC SERVICE COMMISS	LON
	DOCKI	ET NO. 070052-1
In the Matter of	:	Char (0)
PETITION BY PROC		
FLORIDA, INC. TO OF CRYSTAL RIVER	NUNIT 3 UPRATE	
THROUGH FUEL CLA	/	(P) (P) (P) (P) (P) (P) (P) (P) (P) (P)
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A CON	VENIENCE COPY ONLY AND AR ICIAL TRANSCRIPT OF THE H	E NOT
	ERSION INCLUDES PREFILED	
	VOLUME 4	
	Pages 550 through 634	
PROCEEDINGS:	HEARING	
BEFORE:	CHAIRMAN LISA POLAK 1	EDGAR
	COMMISSIONER MATTHEW COMMISSIONER KATRINA	
	COMMISSIONER NANCY A COMMISSIONER NATHAN Z	
DATE:	Wednesday, August 8,	2007
TIME:	Recommenced at 9:40	
	Concluded at 1:15 p.	
PLACE:	Betty Easley Confere: Room 148	nce Center
	4075 Esplanade Way Tallahassee, Florida	
REPORTED BY:	MARY ALLEN NEEL, RPR	, FPR
APPEARANCES:	(As heretofore noted	.)
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1	PROCEEDINGS
2	(Transcript follows in sequence from
3	Volume 3.)
4	CHAIRMAN EDGAR: Okay. We are back on the
5	record from break. Mr. Walls, your witness.
6	MR. WALLS: Yes. We call Mr. Portuondo back
7	to the stand.
8	Thereupon,
9	JAVIER PROTUONDO
10	was called as a rebuttal witness on behalf of Progress
11	Energy Florida, Inc., and having been first duly sworn,
12	was examined and testified as follows:
13	DIRECT EXAMINATION
14	BY MR. WALLS:
15	<b>Q</b> . Mr. Portuondo, have you filed prefiled
16	rebuttal testimony in this proceeding?
17	A. Yes, I have.
18	<b>Q.</b> And do you have your prefiled rebuttal
19	testimony with you?
20	A. Yes, I do.
21	<b>Q.</b> Do you have any changes to make to your
22	prefiled rebuttal testimony?
23	A. No, I don't.
24	<b>Q.</b> If I asked you the same questions in your
25	prefiled rebuttal testimony today, would you give the
	FLORIDA PUBLIC SERVICE COMMISSION

1	same answers that are reflected in that testimony?
2	A. Yes, I would.
3	MR. WALLS: We request that the prefiled
4	rebuttal testimony be moved into evidence as if it was
5	read into the record.
6	CHAIRMAN EDGAR: The prefiled rebuttal
7	testimony will be entered into the record as though
8	read.
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	FLORIDA PUBLIC SERVICE COMMISSION

## IN RE: PETITION TO RECOVER THE COSTS OF THE CRYSTAL RIVER UNIT 3 UPRATE THROUGH THE FUEL CLAUSE

## **BY PROGRESS ENERGY FLORIDA**

### FPSC DOCKET NO. 070052

## **REBUTTAL TESTIMONY OF**

### **JAVIER PORTUONDO**

## I. INTRODUCTION AND QUALIFICATIONS

1	<b>Q</b> .	Please state your name and business address.
2	А.	My name is Javier Portuondo. My business address is 410 South Wilmington
3		Street, Raleigh, North Carolina, 27601.
4		
5	Q.	Have you previously submitted testimony in this docket?
6	А.	Yes. I filed both direct testimony and amended direct testimony in support of
7		Progress Energy Florida, Inc.'s ("PEF's") request for recovery of the costs of the
8		Crystal River Unit 3 ("CR3") power uprate (the "Uprate Project") through the Fuel
9		and Purchase Power Cost Recovery Clause ("Fuel Clause").
10		
11	Q.	Have any of your duties or responsibilities changed since you filed your
12		amended direct testimony?
13	А.	No.
14		

1		II. PURPOSE AND SUMMARY OF REBUTTAL TESTIMONY
2		
3	Q.	Have you reviewed the intervener testimony of Daniel J. Lawton and Patricia
4		W. Merchant, filed on behalf of the Office of Public Counsel ("OPC"), and of
5		Jeffrey Pollock, filed on behalf of the Florida Industrial Power Users Group
6		("FIPUG")?
7	<b>A.</b>	Yes.
8		
9	Q.	Do you agree with what witnesses Lawton, Merchant, and Pollock have to say
10		in response to PEF's request for recovery of the Uprate Project costs through
11		the Fuel Clause?
12	<b>A.</b>	No, I do not.
13		
14	Q.	What is the purpose of your rebuttal testimony?
15	А.	The purpose of my rebuttal testimony is to address the intervener witness arguments
16		and explain why these arguments fail to show that PEF has not met Commission
17		policy establishing that the Uprate Project costs should be recovered through the
18		Fuel Clause. First, I will address the intervener witness arguments that additional
19		tests and definitions should be used for the first time here that are nowhere found in
20		Order 14546. These additional tests and definitions are inconsistent with Order
21		14546 and the later orders applying the policy established in Order 14546, and if
21		14546 and the later orders applying the policy established in Order 14546, and

1	Second, I will address the arguments of some intervener witnesses challenging
2	the application of Commission policy in Order 14546 to PEF's petition. I will
3	demonstrate that PEF's request for cost recovery through the Fuel Clause of the
4	Uprate Costs is consistent with and supported by Order 14546 and the application of
5	the policy in Order 14546 by the Commission in subsequent orders.
6	Third, I will address the argument of witness Pollock that PEF's petition
7	violates the settlement agreement in PEF's last base rate proceeding and explain that
8	PEF's petition does not violate and is in fact consistent with that agreement.
9	Fourth, I will address witness Pollock's further argument that the Uprate
10	Project is needed for reliability to maintain PEF reserve margins and, therefore,
11	there will be additional revenues from customer growth or usage to support the
12	Uprate Project costs. Mr. Pollock, quite simply, is wrong. As this Commission
13	determined in Order No. PSC-07-0119-FOF-EI the need for the Uprate Project was
14	economic, based on the demonstrated fuel savings and increased fuel diversity, and
15	not a reliability need.
16	Finally, I will address the cost allocation issues raised by some of the
17	intervener witnesses and explain that PEF's request in its petition is, again,
18	consistent with Commission application of the policy established in Order 14546.
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#### Q. Please summarize your rebuttal testimony.

21 The Uprate Project benefits PEF's customers. The Uprate Project will provide **A**. 22 PEF's customers substantial fuel savings expected to be in excess of \$2.6 billion by

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the end of 2036 with an expected net present value of savings to costs of \$320 million. Intervener witnesses agree that it is a beneficial project.

Under well-established Commission policy set forth in item 10 of Order 14546, recovery of the Uprate Project costs through the Fuel Clause is appropriate if the costs (1) were not recognized or anticipated in the costs levels used to determine current base rates and (2) if expended, will result in fuel savings to customers. PEF's Uprate Project satisfies this two-part test and, therefore, PEF's Petition should be granted.

9 This Commission policy was adopted to encourage utilities to develop and pursue projects and programs that resulted in fuel savings and, thus, lower costs to 10 11 customers. Intervener witnesses admit this policy provides an incentive for utilities 12 to spend money that they might not otherwise choose to spend to save fuel costs. 13 The policy works. PEF moved forward with the Uprate Project because it was 14 aware of the policy in item 10 of Order 14546. Additionally, utilities have incurred 15 the costs of numerous projects that resulted in fuel savings to customers over the last 16 20 years because of the Commission policy in item 10 of Order 14546.

Intervener witnesses seek to change this policy. They ask the Commission to consider requirements and definitions that are nowhere found in the Commission's policy expressed in item 10 of Order 14546 and numerous, subsequent Commission orders applying that policy to other utility requests. The requirements and definitions they seek to add to this Commission policy do not merely change it, they obliterate it. If adopted, they will destroy the incentive to incur the costs of projects

that result in fuel savings to customers set forth in the clear, straight-forward, twopart test of item 10 of Order 14546.

PEF's request for recovery of the Uprate Project costs is consistent with the 3 application of this policy over the last 20 years in numerous other projects approved 4 5 for cost recovery under item 10 of Order 14546. PEF seeks only the same treatment for its Uprate Project. This does not harm current or future customers at all. In fact, 6 7 they receive the benefits of immediate fuel savings beginning in the first year of the 8 Uprate Project and continuing for every year thereafter. These fuel savings pay for 9 the costs of the Uprate Project, the customers do not, and therefore, customers 10 clearly receive fuel savings benefits from the Uprate Project. The Uprate Project should be approved consistent with the Commission's long-standing policy under 11 12 item 10 of Order 14546.

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### **III. COMMISSION POLICY UNDER ORDER 14546**

Q. Under what Commission policy is the request for cost recovery in PEF's
 Petition made?

A. PEF's cost recovery request in its Petition is based on longstanding Commission
 policy encouraging utilities to incur the costs of innovative projects or programs that
 reduce costs to customers. This policy is incorporated in item 10 of Order 14546
 establishing the types of costs that prospectively can be recovered by utilities under
 the Fuel Clause. Under item 10 of Order 14546 a utility is entitled to recover
 through the Fuel Clause "fossil fuel-related costs normally recovered through base

rates but which were not recognized or anticipated in the costs levels used to determine current base rates and which, if expended, will result in fuel savings to customers."

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Q. What must a utility demonstrate to be entitled to recover costs through the Fuel Clause under the Commission policy established in Order 14546?

A. Under item 10 of Order 14546 the utility must demonstrate: (1) the expected amount
of the project costs; (2) that the expected project costs were not anticipated in
current base rates; (3) the amount of projected fuel savings that will be generated if
the costs are incurred; and (4) that those fuel savings are expected to exceed the
project costs. No other requirements or tests must be met.

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# Q. Intervener witnesses argue that the costs must be volatile to be recovered under the Fuel Clause, even under item 10 of Order 14546. Do you agree?

15 No. No such requirement appears in item 10 of Order 14546. The Commission was **A**. 16 certainly aware that the Fuel Clause was historically used for the recovery of volatile costs when the Commission adopted the policy in item 10 of Order 14546. 17 Yet, nowhere in item 10 or elsewhere in that Order, or in any later Commission 18 19 Order applying the policy adopted in item 10 of Order 14546, has the Commission ever required a demonstration that the costs sought under item 10 of Order 14546 20 must be volatile to be recovered through the Fuel Clause. In fact, the Commission 21 22 expressly recognized in Order 14546 that its policy must be flexible enough to allow recovery through the Fuel Clause of costs normally recovered through base rates. 23

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This is the very first part of the test set forth in Item 10, allowing the recovery of fossil fuel-related costs which are *normally recovered through base rates*, if they are not currently recovered in base rates and result in fuel savings.

4 The Commission policy identified in item 10 of Order 14546 is, therefore, an 5 *exception* to the general rule – as OPC witness Merchant admits (Merchant Test., p. 6 12, lines 7-9) – providing for the recovery of volatile costs through the Fuel Clause. 7 To read a volatility requirement that does not exist into Item 10 of Order 14546, as 8 Interveners suggest, renders the Commission policy established in item 10 of Order 9 14546 meaningless. Fossil fuel-related costs "normally recovered through base 10 rates" by definition are not volatile costs and, therefore, they would never be 11 recovered through the Fuel Clause – even when they result in fuel savings and are 12 not currently recovered in base rates – if a "volatility" requirement is added to item 13 10 of Order 14546. The Commission obviously did not intend a construction of its 14 policy in Order 14546 that obliterates the very policy it adopted. Thus, PEF's 15 Uprate Project costs cannot be rejected because they are not volatile because that is 16 not an appropriate part of the test articulated in Item 10 of Order 14546.

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Q. Some intervener witnesses argue that the Uprate Project costs are not fossil fuel-related costs and, therefore, should not be recovered through the Fuel Clause. Do you agree?

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**A.** No. Under their interpretation of fossil fuel-related costs, such costs are limited to only those which are directly related to the delivered price of fossil fuel. No such

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definition appears in item 10 of Order 14546, elsewhere in Order 14546, or in any Commission order applying the policy adopted in item 10 of Order 14546.

As her support for this argument, Ms. Merchant relies on an example given in Order 14546 to illustrate one type of expense that was appropriately recovered under the Fuel Clause. The Commission acknowledged that the cost of a short-term lease of an oil storage tanker for a utility to take advantage of unanticipated lower oil costs, for example, was recoverable under item 10 through the Fuel Clause. Ms. Merchant claims this example shows that "fossil fuel-related cost" was meant to refer to only those costs "directly related to the delivered cost of fossil fuel to be burned in the boilers to generate electricity." (Merchant Test., p. 12, lines 18-24). The Commission, however, nowhere limited the term "fossil fuel-related costs" in this way in Order 14546. The example provided in Order 14546 was meant to be just that, an example. Indeed, the Commission expressly stated that it intended the policy in Order 14546 to be a flexible one, which negates the narrow "list" of recoverable "fossil fuel-related costs" that Ms. Merchant would use based on the "example" in Order 14546.

As I explained in detail in my amended direct testimony at pages 14-18, the Commission never expressed any intent to give the term "fossil fuel-related costs" in item 10 of Order 14546 the narrow interpretation advocated by intervener witnesses. Such a narrow definition of the term "fossil fuel-related costs" does not make sense because it is inconsistent with the Commission's policy to encourage innovative projects that save fuel costs. Rather, the more logical interpretation consistent with Commission policy is that the term "fossil fuel-related costs" means

1		all costs that result in the reduction or replacement of other, more expensive fossil
2		fuels. This interpretation is confirmed by the Commission's consistent application
3		of its policy in item 10 of Order 14546 in later Commission orders. See Order No.
4		PSC-96-1172-FOF-EI, Docket No. 960001-EI (Sept. 19, 1996); Order No. PSC-95-
5		1089-FOF-EI, Docket No. 950001 (Sept. 5, 1995); Order No. PSC-96-0353-FOF-
6		EI, Docket No. 960001-EI (Mar. 13, 1996); Order No. PSC-97-0359-FOF-EI,
7		Docket No. 970001-EI (Mar. 31, 1997); Order No. PSC-98-0412-FOF-EI, Docket
8		No. 980001-EI (Mar. 20, 1998).
9		
10	Q.	The intervener witnesses apply an "earnings" test to Order 14546, arguing that
11		if part or all of the Uprate Project costs can be absorbed by the Company in
12		current base rates, recovery through the Fuel Clause for the Uprate Project
12 13		current base rates, recovery through the Fuel Clause for the Uprate Project should be denied. Is there an "earnings" test under Order 14546?
	А.	
13	А.	should be denied. Is there an "earnings" test under Order 14546?
13 14	А.	should be denied. Is there an "earnings" test under Order 14546? No, there is not. To summarize the intervener witnesses' argument, they assert that
13 14 15	А.	<ul><li>should be denied. Is there an "earnings" test under Order 14546?</li><li>No, there is not. To summarize the intervener witnesses' argument, they assert that</li><li>(1) the Uprate Project costs are the types of cost fluctuations that base rates are</li></ul>
13 14 15 16	А.	<ul> <li>should be denied. Is there an "earnings" test under Order 14546?</li> <li>No, there is not. To summarize the intervener witnesses' argument, they assert that</li> <li>(1) the Uprate Project costs are the types of cost fluctuations that base rates are</li> <li>intended to cover, and (2) PEF's earnings are such that the Uprate Project costs,</li> </ul>
13 14 15 16 17	А.	should be denied. Is there an "earnings" test under Order 14546? No, there is not. To summarize the intervener witnesses' argument, they assert that (1) the Uprate Project costs are the types of cost fluctuations that base rates are intended to cover, and (2) PEF's earnings are such that the Uprate Project costs, especially for Phase 1, can be absorbed with only a negligible impact on earnings.
13 14 15 16 17 18	А.	should be denied. Is there an "earnings" test under Order 14546? No, there is not. To summarize the intervener witnesses' argument, they assert that (1) the Uprate Project costs are the types of cost fluctuations that base rates are intended to cover, and (2) PEF's earnings are such that the Uprate Project costs, especially for Phase 1, can be absorbed with only a negligible impact on earnings. In addition, Mr. Lawton argues that the Company in fact may be earning too much
<ol> <li>13</li> <li>14</li> <li>15</li> <li>16</li> <li>17</li> <li>18</li> <li>19</li> </ol>	Α.	should be denied. Is there an "earnings" test under Order 14546? No, there is not. To summarize the intervener witnesses' argument, they assert that (1) the Uprate Project costs are the types of cost fluctuations that base rates are intended to cover, and (2) PEF's earnings are such that the Uprate Project costs, especially for Phase 1, can be absorbed with only a negligible impact on earnings. In addition, Mr. Lawton argues that the Company in fact may be earning too much if it is allowed to recover the project costs through the fuel clause, if base rates are

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opinion, a "negligible" impact on PEF earnings as a result of the Uprate Project. There is, however, no such test in Order 14546, and appropriately so.

No "earnings" test of any type is even mentioned in Order 14546. There is no requirement under item 10 of Order 14546 that a utility prove that it is incapable of recovering project costs through base rates without adversely affecting its allowable return on equity. Any requirement to determine if the utility's earnings are affected by a project proposed under item 10 of Order 14546 would necessarily subject the utility to a base rate proceeding inquiry to obtain Fuel Clause recovery of project costs designed to generate fuel savings.

The time and cost that must be invested in a base rate proceeding inquiry 10 11 defeats the purpose of the Commission policy under item 10 of Order 14546. The Commission set forth a straight-forward, two-part test in item 10 of Order 14546 for 12 Fuel Clause recovery to encourage utilities to pursue projects that would generate 13 14 fuel savings for customers. Intervener witnesses agree that this was the Commission's purpose in item 10 of Order 14546. This purpose is advanced by 15 providing utilities the opportunity for cost recovery under a simple test in an 16 abbreviated proceeding. Turning that simple test in a Fuel Clause proceeding into a 17 base rate inquiry eliminates the very incentive the Commission intended to establish 18 19 in item 10 of Order 14546.

PEF specifically considered the Uprate Project because of the fuel savings 20 presented by the Uprate Project and the ability to recover the costs of the Uprate Project through the Fuel Clause under item 10 of Order 14546. The Commission policy represented by item 10 of Order 14546, therefore, was in fact an incentive for the Uprate Project. The Commission's policy to encourage projects that generate fuel savings to reduce customer costs works. The ability to recover the Uprate Project's costs through the Fuel Clause under item 10 of Order 14546 was part of the Company's decision to proceed with the Uprate Project.

None of the Commission's numerous orders applying the Commission's policy under Item 10 of Order 14546 to a utility request for Fuel Clause recovery of project costs that generate fuel savings involved the consideration of the impact of the project costs on the return the utility was earning. For more than twenty years the Commission has applied item 10 of Order 14546 without any "earnings" test. PEF's earnings are, therefore, irrelevant to this proceeding. What is relevant is whether the CR3 Uprate project qualifies under the test set forth in Item 10 of Order 14546. Because it does, PEF's request for Fuel Clause recovery for the Uprate Project costs should be approved.

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Q. Intervener witnesses also argue that, if the costs sought through the Fuel
 Clause under Order 14546 can be recovered in future base rates, they cannot
 be recovered through the Fuel Clause. Is this argument consistent with the
 policy established in Order 14546?

A. No. To explain this argument, intervener witnesses Lawton and Merchant both assert that Phases 2 and 3 of the Uprate Project are not appropriate for fuel clause recovery, because, by the time those costs are incurred, PEF will be able to go into a new base rates proceeding and obtain cost recovery through base rates. (Merchant Test., p. 26, lines 5-7; Lawton Test., p. 23, lines 2-9). Ms. Merchant goes on to

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testify that, given PEF's ability to initiate a new base rates proceeding, there will be no "regulatory lag" in recovering the CR3 Uprate costs, and this is really what Order 14546 was designed to prevent. (Merchant Test., p. 14, lines 7-16).

Intervener witnesses Lawton and Merchant are again reading non-existent requirements into Order 14546. The Commission did not require the utility to show that project costs were not recoverable in *future* base rates to obtain recovery of the project costs through the Fuel Clause under item 10 of Order 14546. Instead, the Commission required the utility to demonstrate that the project costs were not recognized or anticipated in *current* base rates. The intent was to protect against possible double recovery not to eliminate regulatory lag.

11 Indeed, PEF always has the right to initiate a base rate proceeding to address 12 costs that it believes should be included in base rates to provide an adequate return. 13 Even under the rate case settlement agreement, PEF can initiate a base rate 14 proceeding to include costs in base rates if PEF's return falls below a certain level. 15 A requirement that a utility demonstrate that project costs cannot be recovered in 16 future base rates, again, defeats the purpose of the Commission policy established in 17 Item 10 of Order 14546. And, again, in more than 20 years of applying its policy 18 under item 10 of Order 14546, the Commission has never required the utility to 19 show that the project costs cannot be recovered in future base rates to obtain 20 recovery of those costs through the Fuel Clause.

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Q. Intervener witnesses argue that the reference to "case-by-case" consideration
of utility requests under item 10 of Order 14546 means that the Commission

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## should make any issue raised by any party to the proceeding a requirement that must be considered by the Commission in determining whether the relief requested should be granted. Do you agree?

4 No. The Commission intentionally selected a straightforward, two-part test under A. 5 item 10 of Order 14546 to encourage utilities to pursue projects that generated fuel savings and thus lowered the cost of providing power to customers. 6 The Commission was certainly aware of every issue that the intervener witnesses raise in 7 8 their testimony at the time the Commission adopted the policy in item 10 of Order 9 14546, but the Commission decided not to make them requirements of item 10 of Order 14546. As I have explained, the reason the Commission decided not to add 10 the issues raised by the intervener witnesses to the requirements for relief under 11 12 item 10 of Order 14546 is clear: they are disincentives -- not incentives -- to a 13 policy that encourages investment in projects that result in fuel savings to 14 customers.

15 Order 14546 resulted from the Commission's direction to investor-owned 16 utilities and other interested parties to consider the types of costs appropriate for fuel clause recovery. The parties did this and in fact "agreed to a policy addressing 17 the appropriate prospective means of recovering such fossil fuel-related expenses." 18 19 Order 14546 at 1. This policy is reflected in items 1 through 10 of Order 14546, where the Commission states: "As a result of our determinations in this proceeding, 20 21 prospectively, the following charges are properly considered in the computation of 22 the average inventory price of fuel used in the development of fuel expenses in the utilities' fuel cost recovery clauses." Id. at 3. Thus, Order 14546 is a policy of 23

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general applicability, which has the force of a rule, because it applies prospectively to all utilities. Intervener witnesses do not dispute that the Commission established a policy of general applicability in Order 14546, including item 10 of that Order.

As a policy of general applicability, the Commission should apply item 10 of Order 14546 uniformly and consistently to all utilities, applying the same requirements to all to achieve fairness. Likewise, applying consistent, uniform requirements to all utilities provides certainty to Commission policy and, therefore, promotes that policy. In the case of the policy under item 10 of Order 14546, there is a two-part test for recovery under the Fuel Clause that does not include any of the issues raised by the intervener witnesses. Similarly, the Commission has repeatedly and consistently applied this two-part test for over 20 years, without adding any additional requirements as the intervener witnesses suggest.

To allow the intervener witnesses to add to the requirements of item 10 of Order 14546 now, through their "case-by-case" argument, departs from the clear, express requirements of item 10 and past application of those requirements by the Commission, resulting in an unfair and uncertain application of Commission policy. The result will discourage, not encourage, utility projects in the future that achieve fuel savings to reduce customer costs.

In any event, the reference to the recovery of costs under item 10 of Order
14546 on a "case by case" basis does not mean what intervener witnesses say it
means. The full statement is: "Recovery of such costs should be made on a caseby-case basis after Commission approval." Order 14546 at 4. The express recovery
of "such costs" refers to the preceding sentence in item 10 setting forth the two-part

test for the determination of recoverable costs under this item of Order 14546. The term "case-by-case basis," then, cannot be an open-ended invitation to add requirements to the ability to recover costs under item 10 of Order 14546 because it renders meaningless the express reference to the recovery of "such costs" in the same sentence.

Rather, the term "case-by-case basis after Commission approval" was 6 included in item 10 to differentiate the costs under item 10 from the costs under 7 8 items 1 through 9 of Order 14546. Costs identified in items 1 through 9, by the terms of Order 14546 itself, can be included by the utility in the development of 9 their fuel expenses in the Fuel Clause without further Commission action. Costs 10 under item 10 of Order 14546, however, cannot automatically be added to the 11 utilities' fuel expenses but must be added only "after Commission approval," which 12 necessarily must be done case-by-case to determine if the two-part test established 13 14 by the Commission in item 10 of Order 14546 has been met.

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## Q. Do the intervener witnesses seek to apply the Commission policy in item 10 of Order 14546 or change it?

A. I believe the intervener witnesses seek to change Commission policy under item 10
of Order 14546 rather than apply it to PEF's Petition. Every argument that they
assert to add to the requirements set forth under item 10 of Order 14546 – to impose
a volatility requirement, to impose an "earnings" test, to narrowly define the term
"fossil fuel-related costs", and to impose a requirement that costs cannot be
recovered in "future" base rates – can be made with respect to any utility request for

1	cost recovery through the Fuel Clause under item 10 of Order 14546. Their	
2	arguments, in fact, fly in the face of years of consistent application by the	
3	Commission of the express requirements in item 10 of Order 14546. See Order No.	
4	PSC-96-1172-FOF-EI, Docket No. 960001-EI (Sept. 19, 1996); Order No. PSC-95-	
5	1089-FOF-EI, Docket No. 950001 (Sept. 5, 1995); Order No. PSC-96-0353-FOF-	
6	EI, Docket No. 960001-EI (Mar. 13, 1996); Order No. PSC-97-0359-FOF-EI,	
7	Docket No. 970001-EI (Mar. 31, 1997); Order No. PSC-98-0412-FOF-EI, Docket	
8	No. 980001-EI (Mar. 20, 1998). They, therefore, seek to change the Commission	
9	policy, not apply the existing Commission policy to PEF's current request. If the	
10	interveners want to change the policy set forth by the Commission in item 10 of	
11	Order 14546, they should do so in a generic docket involving all utilities that would	
12	be affected by a change in the policy and other interested parties. Indeed, the policy	
13	in item 10 of Order 14546 was adopted in such a generic docket, providing all	
14	affected parties and interested persons an opportunity to participate in and comment	
15	on the development of that policy.	
16		
17	IV. THE APPLICATION OF COMMISSION POLICY UNDER ORDER 14546	
18		
19	Q. Do the intervener witnesses also challenge the application of Commission policy	
20	under item 10 of Order 14546 to PEF's request for cost recovery?	
21	A. Yes, they do. Some intervener witnesses claim PEF has not demonstrated that the	
22	Uprate Project costs are not recoverable in current base rates even though they	
23	concede PEF has demonstrated that the Uprate Project costs were not recognized in	

1		PEF's minimum filing requirements (MFRs) in its last base rate proceeding.
2		Intervener witnesses also challenge the return on equity and recovery period of the
3		Uprate Costs under PEF's request for cost recovery in its Petition. I will address
4		each of these arguments in turn and explain why PEF's request for recovery of the
5		Uprate Project costs through the Fuel Clause is consistent with the Commission's
6		policy under item 10 of Order 14546 and Commission application of that policy to
7		utility requests over the past 20 years.
8		
9	Q.	Are the Uprate Project costs recognized or anticipated in PEF's current base
10		rates?
11	А.	No, they are not. As I demonstrated in my amended direct testimony, the Uprate
12		Project costs were not anticipated and recognized in PEF's MFRs at the time of
13		PEF's last base rate proceeding and, accordingly, the Uprate Project costs are not
14		recognized or anticipated in PEF's current base rates. Intervener Witness Merchant
15		agrees that the Uprate Project costs are not recognized in PEF's MFRs. (Merchant
16		Test., p. 15, lines 20-23).
17		Ms. Merchant argues, however, that just because the Uprate Project costs are
18		not recognized in the Company's MFR's it does not mean that the Uprate Project
19		costs could not be anticipated in current base rates. (Merchant Test., pp. 15-16).
20		She essentially contends that base rates are designed to cover all base-rate type
21		expenses, whether anticipated at the time of the utility's MFRs or not, and therefore
22		the Uprate Project costs were implicitly anticipated in current base rates. (Id.).
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Ms. Merchant's argument is contrary to the very terms of item 10 of Order 1 14546 and, if accepted, renders item 10 of Order 14546 meaningless. Under item 2 10 of Order 14546 a utility is required to show in part that the costs for which 3 4 recovery is sought are those "normally recovered through base rates but which were 5 not recognized or anticipated in the cost levels used to determine current base rates." 6 Order 14546 at 4. The reference to the "cost levels used to determine current base 7 rates" obviously refers to the Company's MFRs because that is how utilities demonstrate their "cost levels" to "determine current base rates." Ms. Merchant's 8 9 argument, then, is inconsistent with the express terms of item 10 and must be 10 rejected.

Additionally, if Ms. Merchant's construction of item 10 of Order 14546 was accepted the policy the Commission adopted in item 10 is again rendered meaningless. Every cost "normally recovered through base rates" that results in fuel savings does not meet the test established by Ms. Merchant, therefore, no such cost would be recoverable through the Fuel Clause under item 10 of Order 14546. The Commission clearly did not intend to adopt a policy in item 10 of Order 14546 that could never be applied.

Ms. Merchant cites no authority to support her novel construction of item 10
of Order 14546. The Commission's application of item 10 of Order 14546, in fact,
refutes her construction of item 10. I am not aware of any Commission order
applying item 10 of Order 14546 in the way Ms. Merchant does.

Finally, this construction of item 10 by Ms. Merchant is just another way to assert that there should be an additional requirement of an earnings test to item 10 of

Order 14546. She is essentially saying that the costs sought by utilities under item 1 2 10 of Order 14546 can and should be absorbed in base rates unless and until the 3 utility determines that its earnings are affected. As I have explained, no such requirement exists under Order 14546 and any such "earnings" requirement 4 5 undermines and does not advance the policy established by the Commission in item 10 of Order 14546. 6 7 8 Intervener witnesses Lawton and Merchant argue that PEF's request for cost О. 9 recovery, in particular the return on equity, is inappropriate. Do you agree? 10 No. PEF's request is consistent with the prior Commission orders applying item 10 А. of Order 14546. For example, the Commission approved FPL's requested return of 11 12 9.2897%, which was FPL's then-current weighted average cost of capital, when the 13 Commission permitted FPL to recover the costs of its thermal power uprate at two 14 of its nuclear units through the Fuel Clause under item 10 of Order 14546. See 15 Order No. PSC-96-1172-FOF-EI, Docket No. 960001-EI (Sept. 19, 1996). 16 Likewise, FPC (now PEF) was allowed to recover a return of 8.37%, which was authorized in Docket 91089-EI, PEF's then-last rate case proceeding, when the 17 18 Commission approved the recovery of the cost of PEF's conversion of its 19 Intercession City combustion turbine units P7 and P9 to burn natural gas through the 20 Fuel Clause under item 10 of Order 14546. See Order No. PSC-95-1089-FOF-EI, 21 Docket No. 950001 (Sept. 5, 1995). PEF's current request is also consistent with 22 other, prior Orders of the Commission under item 10 of Order 14546. See Order

23 No. PSC-96-0353-FOF-EI, Docket No. 960001-EI (Mar. 13, 1996); Order No. PSC-

1	97-0359-FOF-EI, Docket No. 970001-EI (Mar. 31, 1997); Order No. PSC-98-0412	-
2	FOF-EI, Docket No. 980001-EI (Mar. 20, 1998). PEF does not request any	y
3	different treatment for the Uprate Project costs than how other project costs were	ə
4	treated by the Commission under Order 14546.	
5	It must be remembered that the policy established by item 10 of Order 1454	5
6	was intended to encourage utilities to invest in projects that resulted in fuel saving	s
7	to the benefit of customers. Intervener witnesses agree that this was the inter	.t
8	behind item 10 of Order 14546. (Merchant Test., p. 18, lines 7-9; Lawton Test., to	p
9	page 9.). Reducing the allowable return on such project costs based on a claimer	d
10	reduction in the risk, as intervener witnesses assert, would have the effect o	f
11	discouraging, not encouraging, such projects through the Fuel Clause. That is no	it
12	what the Commission intended in item 10 of Order 14546.	
13		
14	Q. Intervener witnesses also argue that the recovery of the Uprate Project cost	s

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should be spread out over the useful life of the Uprate Project rather than correspond to offsetting fuel savings. Do you agree?

A. No. Again, PEF's request is consistent with the Commission's prior application of its policy under item 10 of Order 14546. In Order No. PSC-96-1172-FOF-EI, for example, FPL's thermal power uprate costs were approved for recovery through the Fuel Clause under Order 14546 over a two-year period of time even though the fuel savings were projected out to 2011, meaning that the capital changes had an expected useful life of at least 15 years. Docket No. 960001-EI (Sept. 19, 1996). In fact, through license extensions Turkey Point Unit 3 is licensed to operate until 2032 and Turkey Point Unit 4 until 2033. That means the expected benefit of those uprates will extend over about 36 years. This illustrates that the practice of providing for an abbreviated amortization period is nothing new for projects being recovered under item 10 of Order 14546.

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In Order No. 97-0359-FOF-EI, the Commission approved cost recovery over a 5 6 five-year period through the Fuel Clause under Order 14546 for the conversion of 7 peaking units to burn natural gas (DeBary 7, Bartow 3 & 4, Suwannee 1). Docket No. 970001-EI (Mar. 31, 1997). In Order No. 98-0412-FOF-EI, the Commission 8 9 similarly approved cost recovery over a five-year period through the Fuel Clause 10 under Order 14546 for the costs associated with converting Suwannee Unit 3 to be 11 able to burn natural gas. Docket No. 980001-EI (Mar. 20, 1998). Likewise, in 12 Order No. PSC-95-1089-FOF-EI, the Commission approved a five-year recovery 13 through the Fuel Clause under Order 14546 of the costs of converting Intercession City combustion turbine units P7 and P9 to gas. Docket No. 950001 (Sept. 5, 1995). 14 15 Additionally, in Order No. PSC-96-0353-FOF-EI, the Commission approved FPC's 16 request for the recovery of the costs of converting Intercession City combustion 17 turbine units P8 and P10 through the Fuel Clause under Order 14546 over a five-18 year period. Docket No. 960001-EI (Mar. 13, 1996). These combustion turbines 19 typically have a depreciable life of around 30 years. Suwannee 1 and 3 were placed in service in 1980, DeBary 7 in 1992, and Intercession City 7 and 9 in 1993. The 20 21 fact that the Commission saw fit to approve shortened amortization periods for these 22 projects further illustrates that the treatment PEF is requesting in this Petition is

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Q. Intervener witnesses Lawton and Merchant testify that PEF's requested cost recovery period violates certain principles of the Uniform System of Accounts ("USOA"). Do you agree?

items recovered under item 10 of Order 14546.

nothing new. Rather, PEF's request is consistent with the historic treatment of

No. When considering the USOA requirements it is important to realize that the 7 A. Commission has the ability to modify their application. In fact, every time the 8 Commission has approved abbreviated recovery of a capital project through the Fuel 9 Clause in the past it has exercised this authority. Indeed, intervener witnesses 10 Lawton and Merchant agree these requirements can be waived. (See, e.g., Merchant 11 Test., p. 24, lines 4-6). This is, in fact, what the Commission has done time and 12 13 again in the capital conversion projects and other projects that the Commission has approved pursuant to Item 10 of Order 14546. See Order No. PSC-96-1172-FOF-14 EI, Docket No. 960001-EI (Sept. 19, 1996); Order No. PSC-95-1089-FOF-EI, 15 16 Docket No. 950001 (Sept. 5, 1995); Order No. PSC-96-0353-FOF-EI, Docket No. 960001-EI (Mar. 13, 1996); Order No. PSC-97-0359-FOF-EI, Docket No. 970001-17 EI (Mar. 31, 1997); Order No. PSC-98-0412-FOF-EI, Docket No. 980001-EI (Mar. 18 20, 1998). A shortened recovery period that corresponds to the period that fuel 19 savings offset the project costs is nothing new and is in fact the typical manner of 20 cost recovery approved under Order 14546. PEF's request for a cost recovery 21 period equal to that of the offsetting fuel savings is just an application of this typical 22 23 Commission practice.

2 О. Intervener witnesses also argue that PEF's requested cost recovery period 3 results in intergeneration inequity and harms PEF's customers. Do you agree? 4 A. No. First, intergeneration inequity arises when a customer today pays for 5 something that will not produce benefits until some point in the future. With PEF's 6 Uprate Project, however, today's customers will experience fuel savings 7 immediately, in the first year after the Phase 1 of the Uprate, and projected for every year thereafter. In fact, the first year fuel savings are projected to exceed the Uprate 8 9 Project costs that year. So, PEF's current customers will experience the benefits of 10 the Uprate Project in the form of immediate and continuing fuel savings. Indeed, 11 because PEF will only recover costs to the extent of fuel savings, customers are not 12 paying for Uprate Project costs at all. The Uprate Project costs are being paid for by 13 the fuel savings. Customer bills will remain the same or they will be lower (all 14 other things being equal), so there is no real cost to today's or tomorrow's 15 customers for the Uprate Project.

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16 Second, PEF's requested manner of cost recovery is consistent with every 17 Commission order that has granted cost recovery for utility project costs under item 18 10 of Order 14546. A similar argument regarding claimed intergeneration inequity 19 can be made with respect to each of those past orders. For example, when the 20 Commission approved the recovery of FPL's nuclear uprate costs through the Fuel 21 Clause under Order 14546 over a two-year period the fuel savings were expected to 22 continue for at least 15 years, resulting in the same alleged intergenerational 23 inequity that intervener witnesses claim exists here. See Order No. PSC-96-1172FOF-EI, Docket No. 960001-EI (Sept. 19, 1996). The point is, in that order and in PEF's current request, there is no real intergenerational inequity concern because all customers are receiving fuel savings that through some point in time are simply used to pay for the Uprate Project. Customers should at worst be indifferent to the cost recovery period because the fuel savings are paying for the project costs. This, again, is consistent with the Commission's policy of encouraging utilities to take advantage of projects that result in fuel savings under item 10 of Order 14546.

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8 Finally, intervener witnesses' arguments that PEF's customers are harmed by 9 PEF's request rely almost exclusively on PEF's response to a discovery request 10 (OPC Interrogatory Number 12) requesting revenue requirements information. This 11 spreadsheet, which Mr. Lawton relies on for his exhibit DJL-4, shows that at the end 12 of nine years (2016) the cumulative savings exceed the Uprate Project costs by 13 \$19.27 million. Mr. Lawton focuses on the fact that this spreadsheet shows that at 14 the end of year eight (2015) the net savings show a small negative amount. Mr. 15 Lawton then draws the conclusion that PEF's customers are harmed, at least through 16 2015. Mr. Lawton's reliance on this spreadsheet is misplaced.

PEF developed the spreadsheet showing the revenue requirements as a demonstrative tool to show the cumulative effect of the Uprate Project's fuel savings and to identify an initial cost recovery period whereby cumulative fuel savings exceed the Uprate Project costs. In the spreadsheet that occurs in year nine but PEF proposed an initial ten-year cost recovery period. The actual recovery period will depend, however, on the demonstration of the fuel savings to the costs in each fuel docket proceeding following approval of PEF's petition.

1	As we have repeatedly said, we intend to recover the Uprate Project costs to
2	the extent that there are fuel savings. If there is an insufficient level of fuel savings
3	in any particular year to cover the Uprate Project costs those costs in excess of the
4	fuel savings that year will be deferred to the next year, and so on, until the costs are
5	paid for by the fuel savings. That is why this particular spreadsheet was not used to
6	support PEF's testimony in this proceeding, it is merely representative of the total
7	fuel savings to costs. PEF's position is consistent with prior Commission precedent.
8	In Order No. PSC-98-0412-FOF-EI, the Commission explained: "If the fuel savings
9	during any annual period are less than the amortization and return costs, [PEF] shall
10	limit cost recovery to actual fuels savings and defer recovery of the difference to
11	future periods." Docket No. 980001-EI (Mar. 20, 1998). This is precisely what
12	PEF proposes to do in this proceeding.

# 14 Q. Mr. Lawton argues that "precedent has little value," and so the Commission 15 should not give much weight to its prior decisions. Do you agree?

16 No. All intervener witnesses agree that the Commission established a prospective А. 17 policy of general application in item 10 of Order 14546. As I have explained, for 18 this policy to have the intended effect there must be clear requirements that are 19 uniformly and consistently applied by the Commission to guide utility actions. As a 20 result, the Commission's prior application of the policy identified in item 10 of 21 Order 14546 is especially important to the advancement of the Commission's policy 22 under that Order. Tellingly, Mr. Lawton cites no authority for his argument that the 23 Commission should completely ignore what it has done with other utilities' requests

1		pursuant to item 10 of Order 14546. He also ignores his own position and attempts
2		to distinguish prior Commission precedent approving FPL's request for cost
3		recovery for its nuclear uprate project under Order 14546.
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5	Q.	Do you agree with the distinctions that the intervener witnesses attempt to
6		draw between the FPL uprate (Order 96-1172) and the CR3 Uprate project?
7	А.	No. None of the distinctions that Ms. Merchant (Merchant Test., p. 19) and Mr.
8		Lawton (Lawton Test., p. 22) attempt to draw between FPL's uprate and the CR3
9		Uprate render reliance on Order 96-1172 inappropriate here.
10		Ms. Merchant first contends that the FPL uprate costs were "de minimus"
11		compared to the fuel savings generated. There is no requirement in Item 10 of
12		Order 14546, however, that the fuel savings must outweigh the costs by a certain
13		percentage or by some nominal amount. The only requirement is that the projected
14		fuel savings exceed the costs. Indeed, in FPC's 1998 cost recovery petition for the
15		conversion costs for Suwannee Unit 3 (Order 98-0412), the savings were not much
16		more than the costs of the project. Nevertheless, the Commission approved fuel
17		clause recovery for the costs under Order 14546. Docket No. 980001-EI (Mar. 20,
18		1998). No prior Commission order has imposed some threshold for the cost to
19		savings to support recovery through the Fuel Clause under Order 14546 and Ms.
20		Merchant suggests none in her testimony. This claimed distinction is irrelevant to
21		PEF's request.
22		Next, Mr. Lawton claims the lower cost of FPL's uprate, compared to the

higher cost of the CR3 Uprate, is a material difference between the two projects.

1		Again, Order 14546 imposes no ceiling on the amount of project costs that may be
2		passed through the Fuel Clause. The only requirement is that the projected fuel
3		savings exceed the costs. As demonstrated in PEF's amended direct testimony, the
4		projected fuel savings substantially exceed projected costs for the Uprate Project. In
5		fact, the projected fuel savings from the Uprate Project far exceed the projected fuel
6		savings from FPL's nuclear uprate or any other prior project approved under Order
7		14546.
8		Finally, intervener witnesses Merchant and Lawton both argue that FPL
9		customers received savings in the first year, unlike what will happen with the CR3
10		Uprate. They are wrong. PEF's customers will receive fuel savings beginning in
11		year one and continuing for every year throughout the projected twenty-year period.
12	2	In sum, witnesses Merchant and Lawton attempt to diminish the importance of
13		the FPL order by pointing to immaterial differences between the FPL nuclear uprate
14		and the CR3 Uprate. When it comes to the application of the Commission's policy
15		in item 10 of Order 14546, there is no reason to treat PEF's request different from
16		the FPL request for cost recovery for its nuclear uprate project.
17		
18	Q.	Intervener witnesses Merchant and Lawton also attack PEF's cost estimates
19		and fuel savings projections for this project. Do you agree with their
20		arguments?
21	А.	No, I do not. Witnesses Merchant and Lawton make various sweeping statements
22		about PEF's cost estimates and fuel savings projections to support their opposition
23		to PEF's Petition. Yet, neither of them have done any independent analysis of
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PEF's cost estimates or fuel savings projections nor do they have any reason to believe that PEF has not used the best available methodology and information to estimate the costs and fuel savings. The intervener witnesses offer no evidence to even suggest that PEF's estimates are unreasonable or imprudent in some way. They further agree that prior utility requests for recovery of project costs through the Fuel Clause under item 10 of Order 14546 were similarly based on utility estimates of costs and fuel savings.

8 PEF's cost and fuel savings estimates are consistent with generally accepted 9 utility estimating tools or methodology and consistent with PEF's past and current 10 cost and fuel savings estimation practice. I believe that our cost and fuel savings 11 estimates are reasonable and prudent and represent the best information that is 12 currently available to the Company.

PEF's petition further requests a determination that the Uprate Project is eligible for cost recovery through the Fuel Clause under item 10 of Order 14546 as applied by the Commission. PEF agrees that it will need to demonstrate that its Uprate Project costs are reasonable and prudent as it seeks recovery of the costs through the Fuel Clause as it has consistently done in all other applications of item 10 of Order 14546.

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Q. Witnesses Merchant and Lawton, however, both refer to cost estimates that
 they claim are different from PEF's cost estimates to suggest that PEF's cost
 estimates are unreliable. Do you agree?

1	A.	No. Ms. Merchant, for example, claims that PEF's costs are too indefinite because
2		she says they increased by over \$68 million in just one month. (Merchant Test., p. 4,
3		lines 3-7). Ms. Merchant, however, is comparing apples to oranges. She is
4		comparing the cost estimates presented in PEF's amended direct testimony, which
5		do not include AFDUC, to the cost estimates presented in my late-filed Exhibit 3,
6		which do include AFDUC. The cost estimates have not increased by \$68 million,
7		rather, Ms. Merchant is comparing two different numbers.
8		Mr. Lawton also claims that the fact that the cost estimates are not final places
9		customers' fuel savings at greater risk (meaning that if costs increase, the fuel
10		savings decrease). Of course, the corollary to that is true as well, if the costs
11		decrease, then fuel savings increase. If that occurred, customers would receive even
12		greater benefits. In addition, there is no risk to customers because PEF is proposing
13		to defer cost recovery to the extent fuel savings materialize each year. So, at worst,
14		the project will pay for itself and customer bills will not increase as a result of the
15		Uprate Project.
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18		V. THE RATE CASE SETTLEMENT AGREEMENT
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20	Q.	Mr. Pollock, on pages 5 to 6 of his testimony, argues that the costs of the CR3
21		Uprate cannot be recovered through the Fuel Clause because such recovery
22		violates the PEF rate case settlement prohibition against "new surcharges." Do
23		you agree with his argument?

A. No, I do not. First, the settlement agreement was not intended to preclude Fuel
Clause recovery of costs that properly qualify for such recovery, including costs that
qualify under the Commission policy in item 10 of Order 14546. This is also shown
by paragraph 14 of the settlement agreement, which contemplates a return on equity
for costs recovered through clauses, at exactly the amount that PEF seeks recovery
in its Petition.

Second, the settlement agreement does not explicitly prohibit recovery 7 through the Fuel Clause of costs incurred pursuant to the Commission policy in item 8 9 10 of Order 14546. The agreement nowhere references Order 14546 at all. Order 14546 was issued in 1985, well before the 2005 settlement agreement was signed. 10 Thus, the parties to the agreement certainly knew about the Commission policy 11 12 allowing Fuel Clause recovery pursuant to item 10 of Order 14546 at the time of the 13 settlement. If the parties intended to explicitly prohibit the recovery through the Fuel Clause of costs allowed under the Commission policy in item 10 of Order 14 15 14546 cost recovery they could and should have said so in the agreement.

Lastly, the Company's proposal cannot be considered a "surcharge" at all, 16 because it will not result in increased customer bills. PEF proposes to recover costs 17 18 only to the extent of fuel savings, such that in each year the customers will only pay 19 for the costs that are offset by fuel savings. As such, the costs of the CR3 Uprate 20 project will not result in a surcharge, because customer bills will decrease or, in the worst case, remain the same as they would have been without the project. So PEF's 21 proposal is in fact not a surcharge at all and thus could not violate the rate case 22 settlement agreement in any event. 23

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2		VI. NEED FOR CR3 UPRATE PROJECT
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4	Q.	Mr. Pollock argues that the Uprate Project costs will be paid for by additional
5		customer revenue PEF generates with the project. Do you agree with this
6		testimony?
7	A.	No, I do not. Mr. Pollock ignores the fact that the CR3 Uprate was proposed to
8		meet an economic need and not a reliability need. This is clear from Order No.
9		PSC-07-0119-FOF-EI, the order approving the Company's need for the CR3
10		Uprate. Docket No. 060642-EI (Feb. 8, 2007). There, the Commission clearly
11		stated that the Uprate Project was not needed for reliability, but that the project
12		would generate fuel savings and increase fuel diversity. In other words, the Uprate
13		Project was not needed to maintain its reserve margins to keep up with increasing
14		customer load on the system. Therefore, the Uprate Project costs will not be paid
15		for by revenues from increased customer growth or energy use. Instead, fuel
16		savings will pay for the Uprate Project costs and there will be fuel savings left over
17		for the benefit of PEF's customers.
18		
19	Q.	Does Mr. Pollock make any other arguments regarding PEF's need for the
20		project?
21	A.	Yes, at page 10, lines 5-10 of his testimony, Mr. Pollock argues that the sole need
22		for the CR3 Uprate could not have been the fuel savings, because PEF included the
23		expected megawatt additions into its 2007 Ten Year Site Plan ("TYSP").

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## Q. Do you agree with this argument?

3 A. No, I do not. Mr. Pollock's argument again misses the point of the need for the 4 CR3 Project. Order PSC-07-0119-FOF-EI clearly states that the need was an 5 economic need, i.e. to generate expected fuel savings. Indeed, PEF's 2006 TYSP, 6 filed in April 2006 before PEF's CR3 need and fuel cost recovery petition was 7 initially filed, did not include the CR3 Uprate project among the future planned 8 generating units. It was only after the need for the CR3 Uprate was granted, in 9 February 2007, that PEF included the additional megawatts from the CR3 Uprate in 10 the April 2007 TYSP. The additional megawatts from the CR3 Uprate were 11 included in the April 2007 TYSP because PEF cannot ignore megawatts that will be 12 added to the system once they have been approved by the Commission. But the 13 economic need for the Uprate Project remains the same, and Mr. Pollock is simply 14 wrong to assume that the Uprate Project costs are offset by customer sales.

There is an additional benefit to the CR3 Uprate, however, which can be seen
by its inclusion in the April 2007 TYSP. This project will have the added benefit of
deferring other, fossil fuel generation planned in prior TYSPs.

## VII. COST ALLOCATION ISSUES

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Q. Mr. Pollock argues that the costs of the Uprate Project should be allocated on
the basis of demand rather than energy. Can you address this argument?

Mr. Pollock's argument that the CR3 Uprate costs should be treated as a production 1 А. 2 demand-related cost is based on the erroneous assumption that the capacity of the 3 uprate is needed for PEF to meet its projected peak demands. As I explained, the need for this project was an economic need, not a reliability need. The Uprate 4 5 Project has nothing to do with how much demand PEF's customers are placing on the system. The genesis of the Uprate Project is the fuel savings that will be 6 7 generated by displacing more expensive fossil fuels and purchased power with 8 additional nuclear generation.

9 Furthermore, Order 14546 does not include any requirement that cost 10 allocation between demand and energy customers be considered. Item 10 sets forth 11 a test to consider a utility's request for Fuel Clause recovery, and once the test is 12 satisfied, those costs can be recovered through the Fuel Clause. This is consistent 13 with how the fuel savings will be calculated - the fuel savings will be applied to customers on the basis of energy, not demand. The costs should be similarly 14 15 allocated, otherwise certain of PEF's customers will be receiving more fuel savings 16 benefits while other customers are paying proportionately more of the costs.

The Commission's prior orders involving requests for cost recovery pursuant to Item 10, Order 14546, also confirm that the Commission has never considered cost allocation issues in connection with these types of requests. Indeed, the Commission approved a similar uprate for FPL's nuclear plant, with no distinction between demand and energy allocation. The issue in these prior proceedings was whether the project was appropriate for *fuel clause* recovery pursuant to Order 14546.

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Please comment on Mr. Pollock's arguments regarding recovery of these costs through the Capacity Cost Recovery Clause ("CCRC").

A. Simply put, there is no justification for recovery of the CR3 Uprate costs through the CCRC. The only justification for clause recovery is through the Fuel Clause, pursuant to item 10 of Order 14546. The test set forth in Item 10 of that Order does not address or contemplate CCRC recovery.

8 On page 18 of his testimony, Mr. Pollock sets forth two reasons to support 9 CCRC recovery. First, he points to the fact that the Commission allowed post-9/11 10 security measures to be recovered through the CCRC. According to Mr. Pollock, 11 these security costs are allocated in the same manner as all other production base 12 rate costs (through the CCRC), and therefore the Uprate Project costs should be 13 allocated the same way. It makes little sense to compare PEF's CR3 Uprate project 14 to the post-9/11 security costs. Mr. Pollock has given no reason why the Commission's treatment of the security costs is at all relevant to PEF's Petition. 15 16 Additionally, this argument incorrectly assumes that the Uprate Project costs are 17 base rate costs and should be allocated accordingly. As explained in the Company's 18 Petition and testimony, however, the Uprate Project qualifies for Fuel Clause 19 recovery pursuant to item 10 of Order 14546. How nuclear costs are allocated in 20 base rates, then, is irrelevant to how they are allocated when approved for Fuel 21 Clause recovery.

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Second, Mr. Pollock relies on the Commission's recent nuclear cost recovery rule for new nuclear plants as justification for recovery of the Uprate Costs through

1		the CCRC. This rule has no application to PEF's request in this proceeding. The
2		CR3 Uprate is not a new nuclear plant so the rule does not apply. Furthermore, as
3		Mr. Pollock points out, the rule was not even in effect until April 2007, well after
4		PEF filed its petition in this proceeding. Mr. Pollock's argument that the CR3
5		Uprate costs should be recovered through the CCRC must therefore fail.
6		
7	Q.	Can you comment on Mr. Pollock's argument that fuel savings do not justify
8		fuel clause recovery for nuclear costs?
9	<b>A</b> .	Yes, on page 19 of his testimony, Mr. Pollock argues that the Uprate Project costs
10		cannot be allocated on the basis of fuel savings because FPL and the Commission
11		rejected such allocations in prior proceedings. Both proceedings relied upon by Mr.
12		Pollock, however, were base rate proceedings that addressed costs, such as the
13		original construction of CR3, incurred to meet a peak demand need which this
14		Commission has already determined is not the case with the Uprate Project. Thus,
15		they are not relevant to PEF's request for recovery of the Uprate Project costs
16		through the Fuel Clause under a specific Commission policy in item 10 of Order
17		14546. If PEF meets the test set forth in that order, which it does, PEF is entitled to
18		recover the Uprate Project costs through the Fuel Clause.
19		
20		VIII. MISCELLANEOUS ISSUES

1	Q.	On pages 20-21 of his testimony, Mr. Pollock states that PEF's cost recovery
2		should be reduced to reflect the joint ownership in CR3. Do you have any
3		comments on this testimony?
4	<b>A.</b>	Yes. PEF's request for cost recovery will not include any costs which CR3's joint
5		owners have agreed to pay. Similarly, the fuel savings will be allocated
6		proportionately among the joint owners based on the percentage of costs each owner
7		bears.
8		
9	Q.	On pages 8-9 of her testimony, Ms. Merchant argues that all special cost
10		recovery clauses have limited purposes and must be limited to prevent double
11		recovery. Can you comment?
12	<b>A.</b>	Yes. Ms. Merchant's argument highlights the fact that her main objection to PEF's
13		request is not with the actual request itself but rather with the policy underlying
14		clause recovery in general. She attacks all cost recovery clauses, not just PEF's
15		specific request for fuel clause recovery. These general policy arguments have no
16		place in PEF's specific request for fuel clause recovery pursuant to Item 10 of Order
17		14546. If Ms. Merchant and the other intervener witnesses wish for the
18		Commission to address the clause recovery mechanisms in a more general policy
19		setting, then a separate generic docket should be established for that purpose. But
20		this proceeding is for the purpose of determining whether PEF's Uprate Project
21		costs are eligible for recovery through the Fuel Clause pursuant to existing
22		Commission policy in item 10 of Order 14546.
23		

Q.

## Witness Lawton indicates that ratepayers will suffer a detrimental impact in the form of deferred income taxes, is this true?

3 There may be a deferred income tax impact on the ratepayer. This impact could be А. 4 favorable, detrimental, or nonexistent. It will depend on the amount of time it takes 5 to recover the costs associated with the Uprate Project under PEF's proposal. If 6 PEF recovers all costs associated with the Uprate Project over ten years because the 7 cumulative fuel savings exceed the cumulative project costs, there will be a 8 mismatch between the tax and book life of the assets. This will always occur when 9 recovery is accomplished over a period shorter or longer than the tax life. As such, 10 there has been an impact in every other cost recovered through the Fuel Clause over 11 a shortened time frame. This is nothing new and it is not a surprise to PEF, the 12 Commission, or interveners. The Commission has consistently recognized that 13 there is a benefit to encouraging projects that are designed to minimize fuel costs to 14 the ratepayer. This is why the Commission has consistently approved recovery of 15 such projects through the Fuel Clause on an abbreviated amortization schedule even 16 though there will be deferred tax implications.

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Q. Witness Merchant and Lawton seem confused as to what PEF is proposing to recover through the Fuel Clause associated with this Uprate Project. Can you make it clear what costs you seek Fuel Clause recovery of?

A. Consistent with past Commission precedent and policy, PEF should be authorized to
 recover through the Fuel Clause the amortization of capital costs and a return on
 capital at their current pretax weighted average cost of capital (WACC) of the

1		Uprate Project amortized over a period for which the demonstrated fuel savings
2		exceed the amortization and pretax WACC return of the Uprate Project.
3		
4	Q.	Are you proposing to recover additional O&M costs, deferred taxes, or
5		property taxes through the Fuel Clause?
6	A.	No.
7		
8	Q.	Does this conclude your testimony?
9	А.	Yes, it does.

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BY MR. WALLS:

2 Q. Do you have a summary of your prefiled
3 rebuttal testimony?

A. Yes, I do.

5 Q. Will you please summarize your prefiled
6 rebuttal for the Commission, please?

A. Good afternoon, Commissioners. What
intervenor witnesses have tried to do with this simple
two-part test in Order 14546 is to add terms and
definitions that nowhere appear in the order or in any
later order applying that policy. They want to change
the Commission's policy and not apply it to the uprate
project before you.

14 Some intervenor witnesses argue that if some 15 of the project costs can be absorbed into the utility's 16 base rates without affecting its return on equity, then 17 those costs should be recovered through base rates. 18 There is no earnings test in the policy established by 19 Order 14546. Had there been, this Commission would have 20 applied it in all past cases that had come before it.

The Commission did not use an earnings test in 14546, because it would have turned a request for fuel clause recovery into a complex base rate inquiry, defeating the Commission's purpose of establishing a straightforward test to encourage projects like the CR3

uprate.

2	Intervenors also argue that PEF can ask for
3	the cost of most of the uprate costs in future base rate
4	proceedings, so recovery through the fuel clause should
5	not be allowed. Again, there is no requirement that the
6	utility show when its next base rate case will be
7	sorry. There's no requirement that the utility show
8	when its next rate case will be taken into consideration
9	under Item 10. In fact, that same argument would apply
10	to all the past decisions that the Commission has made.
11	The utility always has the right to put costs
12	through base rates. The Commission knew this when it
13	adopted the policy, and the Commission knew this in
14	every case that came before it. It knew that such a
15	requirement would mean that no projects would ever be
16	recovered through the fuel clause, no matter what the
17	net fuel savings were.
18	Intervenor witnesses further challenge PEF's
19	request because it uses the current weighted average
20	cost of capital. The current weighted average cost of
21	capital has been consistently used by this Commission in
22	pass-through clause proceedings. Typically it's
23	established in a base rate proceeding, and that same
24	rate is approved to be used in all other pass-through
25	dockets.

They argue that there is no risk with fuel 1 clause recovery, so PEF should not be allowed to recover 2 3 a return on equity, only a cost of debt. PEF's request, though, is consistent with the Commission's application 4 of Item 10, allowing utilities to recover their 5 then-current weighted cost of capital, and that current 6 7 weighted cost of capital would be the rate applied during the period of recovery. If the Commission was 8 presented with a base rate case where they reviewed 9 evidence and determined that the weighted cost of 10 capital would change, they would in that order also make 11 the change to pass-through clauses. So this current 12 weighted average cost is not a guarantee for the entire 13 recovery period, and I wanted to make that point clear. 14

period for capital costs. Again, PEF's request is 16 consistent with the Commission's prior order applying 17 this policy. PEF will recover the costs only to the 18 19 extent that there are savings to pay for them. This 20 does not harm customers, because the project will pay for itself through fuel savings, and the Commission has 21 been willing to accept some delay in net savings to 22 customers to encourage projects that benefit customers 23 with substantial overall savings. This again is 24 25 consistent with every petition that has been presented

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Intervenor witnesses challenge the recovery

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to the Commission. In each and every one of those 1 2 cases, the costs were recovered over a significantly shorter period than the overall savings to be accrued. 3 In sum, FPC has met the straightforward test 4 set forth by Item 10 of Order 14546, and the fuel clause 5 recovery for the CR3 uprate project costs is therefore 6 7 appropriate. Thank you. MR. WALLS: We tender Mr. Portuondo for cross. 8 9 Thank you. Mr. McWhirter, CHAIRMAN EDGAR: 10 any questions? CROSS-EXAMINATION 11 BY MR. McWHIRTER: 12 Mr. Portuondo, your company sought an uprate 13 0. for CR3 in 2002; is that correct? 14 15 Α. I'm not familiar with that one, Mr. McWhirter. You were examining Mr. Pollock's testimony, 16 Q. 17 and Exhibit JP-2 to his testimony was the 100 or so cases where utilities have sought an uprate, and item 18 19 number 90 was a CR3 uprate that resulted in 24 megawatts of thermal power increase. Do you have no knowledge of 20 21 that? 22 In the context of the applicability of that Α. 23 uprate to Item 10, it's my recollection that that uprate 24 did not meet the savings test, which is part 2, that the overall costs could be -- or the overall savings could 25

1 be measured and quantified in order to demonstrate that 2 the savings were sufficient to offset the costs. 3 And as a result, you absorbed it in base Q. 4 rates? 5 Α. Yes, sir, because it would not have complied 6 with Item 10. 7 MR. McWHIRTER: I have no further questions. 8 CHAIRMAN EDGAR: Mr. Brew, any questions? No 9 questions. Thank you. 10 Mr. Twomey? 11 MR. TWOMEY: Can we -- (gesturing). 12 CHAIRMAN EDGAR: We can do that. 13 Mr. McGlothlin. 14 CROSS-EXAMINATION BY MR. McGLOTHLIN: 15 16 Q. Mr. Portuondo, I was trying to listen to your 17 summary, and during one part of the summary, you said 18 the 11.75 percent is not a guarantee because, as I 19 understand it, it's possible that the Commission may 20 authorize a different overall cost of capital at some 21 point subsequent to that; is that correct? 22 Α. That is correct, just like what happened in 23 2005 when the last rate case was approved by the 24 Commission and the 11.75 was authorized. It too was 25 authorized to be put in place for all pass-through

1 clauses. I was trying to find the point in your 2 0. 3 rebuttal testimony where you make that point. Can you direct me to it? 4 I don't believe I made it explicitly. 5 Α. Did you make it implicitly? Q. 6 I believe it was implied in the fact that it 7 Α. would be run through a clause recovery mechanism. 8 You understand, of course, that Mr. Lawton's 9 Q. point about a guaranteed return related not to the view 10 that the 11.75 would not change, but rather to the fact 11 that in the fuel cost recovery mechanism, there's a 12 13 feature that we call a true-up mechanism and that he called a reconciliation; is that correct? 14 That is correct. 15 Α. And your point about the overall average cost 16 0. of capital perhaps being changed by another overall 17 average cost of capital is really a separate point, is 18 it not? 19 It's the point to address the appropriateness 20 Α. of the weighted average cost of capital. 21 And the weighted average cost of capital 22 Q. 23 includes a return on equity that is higher than the 24 risk-free cost of debt that he assumed for purposes of 25 his testimony; correct?

He assumed an all-debt financing, which is not 1 Α. 2 realistic for a project of this nature. And it is not consistent with the other capital projects being 3 recovered through other clauses, which earn the current 4 5 weighted average cost of capital. You say he assumed an all-debt cost of 6 Q. capital, but didn't he assume a return on equity that 7 reflected the reduced risk that flows from the 8 9 availability of a true-up proceeding to ensure that the 10 targeted return would be realized? Α. He applied a debt rate as an equity cost rate, 11 which I personally don't believe is realistic. 12 13 But that's very different than saying that the 0. 14 company would finance with 100 percent debt, is it not? 15 Α. It is different. But ultimately, the ability 16 to secure equity capital at that cost rate would 17 probably be unlikely. 18 Would you agree that as compared to Q. 19 depreciation over the normal useful life of an asset, 20 accelerated depreciation such as the ten-year period 21 that is being requested by the company has the effect of 22 generating increased cash flow? 23 Α. Absolutely, and that is one of the shareholder 24 benefits or incentives created by Item 10. 25 As I understand it, with the exception of Q.

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1	the and I don't know if it's more correct to say
2	M-U-R or MUR. I don't know how one pronounces the
3	acronym. But with the exception of the first phase, the
4	balance of the project will be constructed prior to and
5	during the refueling outage of 2009; is that correct?
6	A. With respect to
7	<b>Q.</b> I'm sorry. Let me correct that. Phase 2
8	through 2009 and Phase 3 through 2011.
9	A. Correct. We've allocated time in those two
10	outages that were already scheduled to accomplish the
11	second and third phases of the project.
12	<b>Q.</b> So between this point in time and the point in
13	time let me just ask another question first. Do I
14	understand correctly that the company will recognize the
15	incurrence of the costs associated with the projects at
16	the point in time when they enter commercial service?
17	A. That is correct.
18	<b>Q.</b> And prior to that time, the amounts spent will
19	be accumulated and capitalized and reflected in the
20	plant account at the appropriate time?
21	A. That is correct.
22	<b>Q.</b> Do I also understand correctly that
23	necessarily then the company will finance the
24	construction of those assets prior to the point in time
25	when they enter commercial service?
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That is correct. Α.

And is it true that the calculation of the 2 Q. costs of the project that is being used in the 3 comparison of costs versus fuel savings reflects or assumes the same capital structure that results in the overall average cost of capital that is being employed, 6 in other words, both debt and equity? 7

If your question is does our calculation use Α. the weighted average cost of capital throughout the recovery period that exists today, the answer is yes.

So does that reflect the assumption that both 11 0. equity and debt will be used to finance the construction 12 of the project? 13

Yes. We would attempt to use all sources of Α. 14 capital to finance this project, like we do other 15 capital projects. 16

And bearing in mind that the recognition of 17 Q. 18 the costs and the recovery of those costs will not occur until the point of commercial service, whether the 19 Commission says do it through fuel recovery or whether 20 21 it says do it through base rates, the company would have to finance the construction of that project in either 22 23 event?

24 Α. If the company elects to pursue the Correct. 25 project, yes, we would have to finance it in any event.

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1	MR. McGLOTHLIN: Those are all my questions.
2	CHAIRMAN EDGAR: Mr. Wright.
3	MR. WRIGHT: No questions, Madam Chairman.
4	Thank you.
5	CHAIRMAN EDGAR: Mr. Twomey.
6	MR. TWOMEY: Yes, Madam Chair. Thank you.
7	Just a couple.
8	CROSS-EXAMINATION
9	BY MR. TWOMEY:
10	<b>Q.</b> Good afternoon, sir.
11	<b>A</b> . Good afternoon.
12	<b>Q</b> . On page 3 of your rebuttal testimony, you
13	again discuss the \$2.6 billion of benefits to be
14	achieved to the benefit of your customers; right?
15	A. Correct.
16	${f Q}$ . And you say the project will result in fuel
17	savings and lower costs; correct?
18	<b>A.</b> Could you point me to where you are?
19	<b>Q.</b> I think it's on page 4, or maybe you just say
20	the policy of Item 10 is to result in fuel savings and
21	lower costs; is that correct?
22	<b>A.</b> Again, where are you pointing? Where are you?
23	COMMISSIONER McMURRIAN: Mr. Twomey, is it
24	line 10?
25	MR. TWOMEY: Pardon?
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1 COMMISSIONER McMURRIAN: I think it may be 2 lines 9 and 10 on page 4. 3 MR. TWOMEY: Commissioner, it sure is. I just 4 wrote it down in my notes, and I didn't have it 5 underlined. 6 BY MR. TWOMEY: 7 Q. She's right. Will you look at lines 9 and 10? 8 Α. Yes, I see it. Is that your testimony? 9 Q. 10 Yes, it is. That is the intent of the policy, Α. is that those fuel savings will result in lower costs to 11 customers. 12 And I understand the thrust of your testimony 13 0. 14 in this case is that this project is consistent with the 15 intent of the policy; right? 16 Α. Yes, sir. 17 Ο. If you go ahead and undertake it? 18 Α. Correct. Would you say that if you undertake the 19 Q. 20 project and you achieve fuel savings and lower costs, that you are providing your customers with more 21 22 efficient service than if you didn't undertake the 23 project and had higher fuel costs and higher costs, 24 operating costs? Does this --25 I don't look at this project as efficiency. Α. FLORIDA PUBLIC SERVICE COMMISSION

It's more in terms of, you know, lowest cost to our 1 2 customer. I see efficiency more, you know, are the lights flickering, or am I interrupting the customer 3 frequently. I see that as the efficiency of our 4 5 operations to provide service to the customer. I guess I have a different view of efficiency. 6 You would just say -- because you recognize, 7 Q. don't you, that you have an obligation to provide your 8 customers with efficient service, don't you? 9 Efficient, reliable service, yes, I agree with 10 Α. 11 that. 12 So you're saying that you see efficient as Q. making the lights not flicker and avoiding operation --13 discontinuation of service? 14 15 Α. Yes, sir. But you don't want to include achieving lower 16 Q. 17 costs and fuel savings in the definition of efficient? I don't personally look at it that way. I see 18 Α. 19 our role as a regulated utility to provide safe, reliable, efficient service to our customer at the least 20 cost possible. The least cost is -- this component that 21 22 we're talking about here today is how can I be 23 innovative and do something, whatever that may be, to find an opportunity to lower costs to our customers. 24 25 Q. So you're saying you do recognize that you

have an obligation to provide least cost service? 1 Oh, absolutely. I think in every single 2 Α. petition that has come before the Commission, that 3 fundamental premise has existed. 4 Okay. Now, I want to be clear on your answer 5 Q. to this. Again, my understanding of your testimony is 6 that the lower fuel costs -- the fuel savings and the 7 lower costs would still be attainable to the benefit of 8 the customers as long as you undertook and completed 9 this uprate project, irrespective of the method of 10 capital and cost recovery; is that correct? 11 12 Α. Correct. So to the extent that anybody in this room was 13 Ο. concerned that the fuel savings and the lower costs 14 ascribed to the project can't happen except if you get 15 your petition approved, that's not necessarily true, is 16 17 it? No. I don't think we've ever said that that 18 Α. wasn't true. I think what we've said is that this order 19 20 provided the incentive for the companies to bring before the Commission projects that would create fuel savings, 21

but allow a timely recovery of their costs absent the need for a base rate proceeding.

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In your example where the project is done in base rates, the economics of the project, the total net

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savings may not be as large over the life of the project 1 2 as it is presented in our petition. The reason for that 3 is, just like with a home loan or a mortgage, if you pay it off in 30 years, that's going to cost you more than 4 5 paying it off in 15 years or in 10 years. So that same concept would have to be applied, and the net fuel 6 7 savings would be different. That's not to say that 8 they're going to go away, but they are different. 9 Well, using that argument -- so you're saying Q. that thesis benefits customers. Did I hear you 10 correctly? 11 It benefits customers, and it benefits the 12 Α. 13 company through increased cash flow in order to redeploy 14 resources to meet other projects. Your company here in Florida has announced 15 0. 16 that it intends to build at least one, perhaps two new 17 nuclear generating units in Levy County; correct? 18 Α. Correct. 19 Q. Those plants are projected to cost what, 5, 20 6 billion apiece? 21 I don't have those numbers. Α. 22 Q. Do you have a ballpark figure? 23 Α. No. Let's say they cost only \$4 billion. Would it 24 Q. 25 be your thesis that customers would be better off paying FLORIDA PUBLIC SERVICE COMMISSION

off the capital costs of the plant in ten years as opposed to the expected operating lives of the plants because they would pay less interest? That would be consistent with what you just said here; right?

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A. That's correct. If you shorten the recovery period, you reduce the amount of carrying costs that the customer pays.

Q. But you don't expect that if you build that plant and put it in rates that it's going to be recovered under any other scenario but over the projected operating life of the plant, do you?

A. Oh, correct. No, I would never propose such a thing for a base load capacity need, absolutely not.

Q. Okay. With the limitations, I think, of what Mr. McGlothlin asked you about a second ago, the fact of the matter is, to the advantage of the company, that if you get your petition approved, you will essentially have a guaranteed return at some level, presumably starting at 11.75; isn't that correct?

A. To the extent that the costs are deemed prudent by this Commission, that is correct.

22 **Q.** And isn't it true as well that that guarantee, 23 at whatever level, is superior, in terms of providing 24 shareholder value, to having the mere opportunity of 25 earning whatever your authorized rate of return is

through base rate recovery? Do you understand the 1 2 question? I quess I wouldn't say it's superior because, 3 Α. again, given the range of reasonableness, base rates 4 5 also provides me the opportunity to earn more than the 6 11.75. What is your most recent reported return on 7 Q. equity in your last surveillance report? 8 9 Α. The December was 11 percent. The latest was, I think, 10.8. I think 10.8. I don't have it committed 10 to memory. I do have the December committed to memory. 11 That's a good enough answer. Thank you. 12 0. I want to skip for a minute and go to the page 13 32 area. You don't need to refer to it. I think you'll 14 understand. It's the part of your testimony that deals 15 with cost allocation issues, and you were asked some 16 17 questions on this yesterday. But it's clear from your statement there that since you ascribe the construction 18 and planning of this plant uprate to fuel savings, you 19 believe equitably it should be -- the costs should be 20 21 recovered through the fuel clause as well, not the 22 capacity clause; correct? 23 Right. I think that's an appropriate matching Α. of the cost assignment to the clause which is giving 24 25 rise to the savings.

And I think I heard you say that that 1 Q. 2 methodology of recovery through the fuel clause would be more equitable to residential customers of yours, 3 including most of my clients, than going through the 4 capacity clause; correct? Or isn't that the result? 5 6 Α. I guess the way I would phrase it is that the opposite would be inequitable, because the savings are 7 accruing based on energy, and it would be inequitable to 8 charge the costs on a different basis which would put a 9 larger burden on your residential customers. 10 Fair enough. Let me go back to the -- help me 11 Ο. have a clearer understanding of the distinctions between 12 how the customers are treated and the company is treated 13 as between the fuel clause treatment sought in your 14 15 petition versus rate base recovery. The fuel savings, if your petition is approved, when do the net fuel 16 17 savings again start accruing to the benefit of your 18 customers? 19 You said the net fuel savings? Α. 20 I ask that because -- help me on this. Q. Yes. 21 My understanding is that the fuel savings would be used 22 to pay down -- to the extent they exist, they would be 23 used to pay down the capital costs of the project.

24A. Correct. And I think the first year in which25customers actually see a benefit is in 2008, with the

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installation of the MUR. I believe that the savings in 1 that year surpass the \$6 million worth of costs, so it 2 would be -- in 2008 would be the first year. 3 And when would they -- when would the fuel Q. 4 savings first occur to the benefit of the customers if 5 the recovery was through base rates? 6 Α. 2008. 7 Okay. And if you know, what would the 8 Ο. relative magnitude of the savings be for the two? 9 It would be the -- well, they would get Α. 10 100 percent of the savings through fuel in 2008, and the 11 costs would be absorbed into current base rates. 12 Q. Base rates? 13 Α. Correct. 14 MR. TWOMEY: Okay. Thank you. That's all I 15 have. Thank you. 16 CHAIRMAN EDGAR: Commissioners. Commissioner 17 Carter. 18 COMMISSIONER CARTER: Thank you, Madam 19 Chairman. 20 Mr. Portuondo, I'm trying to get my head 21 around this issue here. You heard my questions this 22 morning regarding Paragraph 10. Yesterday you were 23 asked a line of questioning by Commissioner Argenziano, 24 and also this morning you heard the line of questions by 25

Commissioner Skop in the context of -- and if I got it wrong, I'm sure you'll let me know. In Phase 1, I think you said there would be like 12 megawatts, and in Phase 2 there would be like 40 megawatts. In light of Exhibit 28 which was presented to

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you yesterday, wouldn't that be more in line with the actual applications, the prior applications of Item 10 more so than what you're presenting now? Wouldn't it fall within that -- I mean, you're talking about 40 megawatts, plus you're talking about substantially less than \$400 million; correct?

12 THE WITNESS: Yes and no. Yes and no, sir. 13 If you're simply comparing costs, yes, the first phase 14 is more in line with the costs that were presented in 15 previous proceedings, 6 million. The savings are based 16 on smaller megawatts, so again, probably very 17 comparable.

18 Again, but I think all of the phases that we're presenting in this proceeding are identical to the 19 20 fundamental principles that were used to approve those 21 smaller cost, smaller savings type projects, since the 22 goal is, are you in essence holding the customer 23 harmless because you're able to fund the recovery of the 24 project costs with achieved fuel savings. And the 25 Commission is allowing the recovery over whatever period

those savings are sufficient to cover the costs so that it's collected as quickly as possible and the full 100 percent of the savings can accrue to customers as quickly as possible.

COMMISSIONER CARTER: Madam Chair.

But we're talking about a significantly less amount of money in this process here, though; right? I'm kind of zeroing in on this Phase 1 and 2 in terms of the megawatts that would be provided and the savings. Do you understand what I'm trying to get here?

THE WITNESS: Yes.

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COMMISSIONER CARTER: It seems inconsistent --12 13 excuse me for a moment. Let me just kind of finish my 14 thought pattern here. It seems more consistent with --15 particularly as we look at Exhibit 28, it seems more 16 consistent with the projects that were within the 17 confines from prior orders or the prior applications of this Item 10 than the proposal as it's currently 18 19 iterated.

THE WITNESS: Well, I don't agree. I think that -- let's look at the circumstances in each of those cases as compared to ours. It was a capital investment that was being made in a generating facility. It was a capital investment that had a useful life far longer than the recovery period awarded. It was a capital

investment whose -- it was a capital investment that, if 1 2 undertaken, would create savings, fossil fuel savings 3 far superior to -- far greater than the costs that would 4 be necessary to achieve those savings. 5 In each of those previous cases, the utilities 6 were being monitored from an earnings surveillance 7 perspective, so the Commission, the staff, and the intervenors all knew what the range of reasonableness 8 was. So that's the same. 9 The utilities would have known that these 10 11 projects were being contemplated and would have to 12 schedule them accordingly, especially St. Lucie. You 13 would have to plan for an outage. So in that case, they 14 could have planned for a base rate proceeding if that was the intent of the Commission. 15 16 So every single one of those factors that 17 existed for every one of those cases exists here today 18 with this case. 19 COMMISSIONER CARTER: Are you saying this is 20 identical to the other cases? Because I don't read it 21 that way. 22 THE WITNESS: I certainly do. 23 COMMISSIONER CARTER: No further questions. 24 CHAIRMAN EDGAR: Commissioner McMurrian, and 25 then Commissioner Skop.

COMMISSIONER McMURRIAN: Thank you. 1 Mr. Portuondo, in your opening statement or your 2 summary, you mentioned that you wanted to make clear 3 something about the weighted average cost of capital, 4 and the way I have it is that the current average cost 5 is not a guarantee over the entire recovery period. And 6 I didn't quite get all of that, so could you elaborate 7 on that for me? 8 THE WITNESS: I sure can. Typically what's 9 done is, the Commission will take testimony in a base 10 rate proceeding, and they will establish the common 11 equity cost rate. And the cost rate authorized in that 12 proceeding is then applied prospectively to any 13 pass-through clause where capital investments are being 14 recovered. So it becomes applicable to your 15 environmental clause, your energy efficiency cost 16 recovery clause, and the fuel clause or capacity clause 17

18 to the extent you have a return that's being recovered 19 in those clauses.

The next time the Commission changes the reasonable weighted average cost of capital in the next base rate proceeding or show cause proceeding, then I would expect the same thing to occur, given history.

24 COMMISSIONER McMURRIAN: Okay. Thank you. I 25 did have a couple others. In cross by Mr. Twomey, there

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was discussion about when customers see benefits with respect to your project, and I remember that earlier when we were talking to Mr. Lawton, there was a discussion about that the customers would get the benefits after the first ten years. And I may be confusing something, but I wonder if you can help me sort of get that straight.

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8 THE WITNESS: Sure. Because we are 9 accomplishing this total uprate in three phases because 10 of the three outages that are already scheduled, the 11 first outage is this fall in 2007, where the MUR project 12 will go in. So that asset will become commercial, as 13 Mr. Twomey indicated, in the November-December time 14 frame of '07. So the benefits of those 12 megawatts 15 begin to accrue in 2008 and beyond.

The costs to recover that MUR, given the small nature, as Commissioner Carter indicated, is not greater than the expected savings in that one year from the 12 megawatts. So customers will see a reduction in their -- all other things being equal, in their factor for fuel in 2008 because there are more savings than there are costs being recovered.

COMMISSIONER TEW: I know I should have probably asked this of Mr. Lawton, and we're through with Mr. Lawton, but can you help me remember why he

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might say that after the first ten years is when the 1 2 customers would see the benefit? 3 THE WITNESS: Sure, and I can. It has to do 4 with Phase 2 and Phase 3. The savings for Phase 2 and 5 Phase 3 are not sufficient to pay for the costs and 6 still leave savings available to customers until the --7 what we hope to be the ten-year period. Once that 8 ten-year period is complete, then they get 100 percent 9 of the savings. 10 Now, having said that, even within that 11 ten-year period, there could be two, three, four years 12 where you get some savings, but not huge like you will 13 get following that ten-year period. COMMISSIONER McMURRIAN: And that would depend 14 15 on the actual amount of costs that are put through the 16 clause in any given year, and then the savings on the 17 fuel side? 18 THE WITNESS: Exactly. 19 COMMISSIONER MCMURRIAN: So is it correct to 20 say that in 2008 there might be savings, but then there 21 may be a gap of possibly up to ten years where there 22 wouldn't be savings to customers in those given years, 23 and then the savings would pick up again? Is that where 24 the ten years --25 THE WITNESS: Correct. That could be an

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outcome. Another outcome could be that they get a small 1 2 amount of savings in every year. It will all depend on 3 the projected savings, the cost of oil, the cost of gas. COMMISSIONER McMURRIAN: And I did have one 4 5 more, Chairman. Earlier when Mr. McWhirter was asking 6 you a question about Table 2 under Mr. Pollock's 7 Exhibit, JP-2, and he asked you about the Crystal River 8 3 uprate, I guess in 2002, and you said that it didn't 9 comply with Item 10. And I just wanted to ask you why 10 didn't it apply with Item 10.

11 THE WITNESS: Well, one of the things that the 12 Commission requires under Item 10 is that you prove up 13 the fuel savings. As I was asked yesterday in direct, 14 we will present to the Commission a schedule, an exhibit 15 and testimony showing the savings, and we will be 16 running the models to quantify those savings.

My recollection of the type of modification that was being made in that particular uprate was not conducive to being able to present that kind of evidence to the Commission. So my recommendation to management was that it did not meet the tests under Item 10, because I could not demonstrate the savings to offset the costs.

COMMISSIONER McMURRIAN: Thank you.
 CHAIRMAN EDGAR: Commissioner Skop.

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1 COMMISSIONER SKOP: Thank you, Madam Chair. 2 Again, I have some questions along the lines that 3 Mr. McWhirter brought on cross-examination. Again, he 4 raised a point that escaped my attention, and Commissioner McMurrian also brought that point home a 5 6 little bit. But I would like to draw your attention 7 also to the prior uprate that was done on CR3. And I 8 just want to make sure for my own knowledge -- and 9 again, I'm having trouble at times hearing all the way 10 down here on the end. But that uprate was performed in 11 2003; is that correct? 12 THE WITNESS: Yes. 13 COMMISSIONER SKOP: And I noticed that in that 14 table, page 7 of JP-2 -- and I don't know if you have 15 that before you. 16 THE WITNESS: This is of my rebuttal 17 testimony? 18 COMMISSIONER SKOP: No, it's JP-2. It's 19 another table that was referenced in Mr. Pollock's. And 20 I can speak to the point without reference to the 21 exhibit, because it was for a different witness's 22 testimony. But that uprate in that exhibit was 23 identified as a stretch uprate, and it was basically 24 .9 percent with 24 megawatts of increased generation. 25 And I'm curious for two points, one of which

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1 was raised by Mr. McWhirter, and the other one raised by 2 Commissioner McMurrian. Having been identified as a 3 stretch uprate, which is basically what the Turkey Point one was, it just seems -- I don't know what went into 4 that uprate. But again, out of all the uprates on those 5 three pages, for a stretch or a MUR, that's the lowest 6 percent uprate of any of those, so I'm kind of wondering 7 8 what made it a stretch uprate, given the fact that the 9 percentage was the smallest of any that I see on that paper. Do you have any explanation as to that, of what 10 11 was done with that uprate? THE WITNESS: No, sir, I do not. I don't know 12 13 how the NR -- I'm assuming this is an NRC document. 14 COMMISSIONER SKOP: Yes, sir. 15 THE WITNESS: And how they evaluate something 16 being stretch versus not a stretch, no. COMMISSIONER SKOP: Okay. Moving on to that 17 18 point where you mentioned that this project was 19 recovered through the base rates, you mentioned in 20 response to Commissioner McMurrian it was because you 21 didn't feel that it gualified under Item 10 to the 22 extent that you could not quantify the fuel cost savings 23 associated with that. Is that correct? 24 THE WITNESS: Yes, sir. COMMISSIONER SKOP: But I think you admit that 25

1 any additional nuclear generation would displace fuel savings; correct? 2 THE WITNESS: Yes, but I have to be able to 3 bring that evidence to the Commission. I just -- take 4 5 my word for it, I don't think it's going to fly. COMMISSIONER SKOP: So how in the instant case 6 are you able to identify that when in the past you 7 weren't able to do that for an uprate, which is an 8 9 uprate, which is an uprate? THE WITNESS: The -- my understanding was that 10 11 the modeling for that 24 megawatts, we were not able for 12 some reason -- and again, I take what's presented to me. My first question to them is, "Prove it up to me." And 13 what I was being told was that there was a problem with 14 15 being able to model those savings, and therefore I 16 rejected it. 17 Here in the instant case, I was presented by Mr. Waters the analysis, the runs of the PROSYM model 18 that supports this savings calculation. So in this case 19 20 I said, "Okay. I do have evidence. I can show the 21 models." 22 For some reason, running of the models was not 23 capturing that uprate differential. I don't know why. 24 COMMISSIONER SKOP: So as a follow-up, you 25 can't quantify the avoided cost of fuel savings based on

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24 additional megawatts of nuclear under an uprate as opposed to what you would have to otherwise generate via a fossil fuel?

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THE WITNESS: You know, I wish I knew all the particulars, but I don't. You know, we're able to quantify the MUR, which is 12 megawatts. They presented that to us. This particular case, you know, I regret I don't have the particulars of why they couldn't do it. I just know that if they can't bring it to me, I reject it.

11 COMMISSIONER SKOP: Okay. And finally, with 12 respect to that uprate that was performed -- again, I 13 think we've belabored the point between how can you 14 quantify an MUR of 12 megawatts and come forward versus 15 having 24 megawatts previously and not being able to do 16 the same thing, but I won't belabor that point.

17 With respect to the uprate that was performed 18 in 2002, which again escaped my diligent reading until 19 it was brought forth, is any part of that stretch uprate 20 -- and I assume they only have one reactor there. It's 21 not like Turkey Point where they have two, and it's not 22 like Port St. Lucie where they have two or three, or 23 actually two. Is any part of that uprate redundant to 24 what's being proposed now in terms of what has been 25 granted under the need determination?

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1 THE WITNESS: No, sir. 2 COMMISSIONER SKOP: And did that uprate of the 3 24 megawatts, is that reflected in the 900 megawatts 4 that's shown for the premodification of the existing 5 reactor plant? 6 THE WITNESS: Yes, sir. COMMISSIONER SKOP: Okay. Thank you. 7 8 CHAIRMAN EDGAR: Commissioners, any other 9 questions at this time? No. Are there questions from 10 staff? 11 MS. BENNETT: Yes, Madam Chair. Thank you. 12 CROSS-EXAMINATION 13 BY MS. BENNETT: 14 Mr. Portuondo, we discussed earlier that the Q. 15 project, the useful life of the project will be until 16 2036, but the savings, the costs will be collected from 17 the customers in the first ten years, approximately; is that correct? 18 19 Α. Yes, ma'am. 20 I need to talk a little bit about the federal 0. 21 tax period and deferred taxes. The federal tax period 22 for recovery of all the assets associated with the CR3 23 uprate project is 15 years; is that correct? 24 Yes, it is. Α. So PEF's proposed recovery period of ten years 25 Q. FLORIDA PUBLIC SERVICE COMMISSION

or less for the investment in the CR3 uprate project is 1 less than the tax life of these assets; is that correct? 2 That is correct, and it is consistent with all Α. 3 past approved projects under Item 10. 4 Mr. Young is going to hand you a document 5 Q. entitled "Deferred Tax Impact of Different Recovery 6 Periods," which was Late-filed Exhibit Number 2, and 7 that would be identified as Hearing I.D. No. 24. 8 (Exhibit 24 was marked for identification.) 9 BY MS. BENNETT: 10 And do you recognize this schedule? 11 Q. Yes, I do. 12 Α. Did you or someone under your supervision 13 Q. prepare this schedule in response to a question during 14 your July 24th deposition? 15 Yes. 16 Α. To your knowledge, is this schedule true and Q. 17 accurate? 18 Α. Yes. 19 Are there any changes that you're aware of 20 Ο. that need to be made to this schedule? 21 Not that I'm aware of. 22 Α. To the extent that the recoverable life of an 23 0. asset is less than the tax life of the asset, would you 24 agree that there would be a detrimental impact on 25

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deferred taxes?

A. Detrimental impact on the weighted average cost of capital, yes.

**Q.** Okay. Yes. And did PEF attempt to quantify the impact on deferred taxes if its proposal for recovery periods is accepted by the Commission?

A. No, we did not.

Q. If PEF's recovery of the investment in the CR3
uprate project is spread over the expected useful life
of the uprate assets, such treatment would preserve the
value of the deferred taxes for the benefit of the
ratepayers; is this correct?

A. If I could restate that, if the recoverable
life is greater than the tax life, it would create a
benefit to rate base through a lower weighted average
cost of capital.

Q. Okay. And if PEF's recovery of the investment in the CR3 uprate project is spread over the expected useful life of the uprate assets, that will leave more savings that will lower the fuel factor to customers; is that correct?

A. Could you repeat that?

23 **Q.** Sure. If PEF's recovery of the investment in 24 the CR3 uprate project is spread over the expected 25 useful life of the uprate assets, that will leave more

savings that will lower the fuel factor to customers; is 1 this correct? 2 That is correct. On an annual basis, that is Α. 3 correct. Over the long term or over the useful life, 4 because of the carrying charges on the uncollected 5 balance, it would be no different than in base rates. 6 They would end up paying more than what we've presented 7 here today. 8 Yesterday you were in the room when Mr. Waters 9 Q. testified, and he deferred some questions to you; is 10 that correct? 11 Α. Yes. 12 Do you recall I remember those questions. 13 Q. Mr. Waters talking about the recovery method of the 14 Bartow repowering project? 15 Yes. 16 Α. Would you agree that the recovery of the 17 Q. investment in the Bartow repowering will be through base 18 rates? 19 Absolutely. 20 Α. Hines Unit 4 is expected to come online in 21 Q. December of this year; is that correct? 22 Yes. Α. 23 When Hines Unit 4 comes online later this 24 Q. year, would you agree that recovery of the investment in 25 FLORIDA PUBLIC SERVICE COMMISSION

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Hines Unit 4 will be through base rates?

That is correct. Both of those power plants 2 Α. 3 were constructed to meet a capacity need, and the difference between those and the project before you 4 5 today is that the fuel savings that those projects may 6 provide to the system in no way are greater than the 7 cost of those projects, so that's test 2 of Item 10, do the fuel savings -- are the fuel savings greater than 8 9 the costs expended to achieve. 10 Okay. Would you turn to page 29 of your Q. rebuttal testimony? And I want to refer you to lines 3 11 12 through 6. Yes, ma'am. 13 Α. On lines 3 through 6, you discuss the cost 14 Q. 15 estimate of the CR3 uprate project with and without AFUDC; is that correct? 16 17 That's correct. Α. 18 Q. And AFUDC stands for? 19 Allowance for funds used during construction. Α. 20 Q. Also in this passage, you mention a Late-filed 21 Deposition Exhibit 3; is this correct? 22 Α. Yes. 23 And Late-filed Deposition Exhibit 3 was filed Ο. 24 in response to an OPC inquiry during your May 23rd 25 deposition; is that correct?

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1 Α. Correct. 2 MS. BENNETT: I'm having an exhibit Mr. Young 3 is passing out that is the late-filed exhibit. And, Madam Chairman, could we have that marked as Exhibit 29? 4 5 CHAIRMAN EDGAR: We will mark as Exhibit 29, 6 and can you give me a description? MS. BENNETT: Besides the long sheet, it is 7 the Excel spreadsheet showing AFUDC, Late-filed Exhibit 8 9 3. And as a note, Madam Chair, this exhibit will take care of the problem I talked with you about at the 10 11 break. CHAIRMAN EDGAR: All right. That will work. 12 (Exhibit 29 was marked for identification.) 13 14 BY MS. BENNETT: Mr. Portuondo, do you recognize this schedule? 15 Q. 16 Α. Yes, I do. 17 Would you turn to the second page? Q. 18 Α. Yes. Does this schedule show the amount of return 19 Q. 20 PEF projects it will earn on the CR3 uprate project if 21 it is allowed to recover the investment through the fuel 22 cost recovery clause? 23 It does. There's a section called "Return," Α. 24 and it shows the annual return expected through the 25 recovery period.

And what is the total amount of the return PEF Q. 1 projects to earn on the CR3 uprate project if it's 2 allowed to recover the investment through the fuel cost 3 recovery clause? 4 I've got to add it up. Α. 5 The total return, debt and equity, is 6 291 million. 7 Thank you. And then one final line of Q. 8 questioning. It's my understanding that Progress Energy 9 is releasing its second quarter earnings results today; 10 is that correct? 11 Today is the 9th. Yes. Α. 12 And Bob McGehee is the chairman and chief 13 Q. executive officer of Progress Energy; is that correct? 14 Yes, he is. Α. 15 And when Mr. McGehee mentions core businesses Ο. 16 with respect to Progress Energy, he is referring to its 17 utilities, Progress Energy Florida and Progress Energy 18 Carolinas; is that correct? 19 That is correct. Α. 20 MS. BENNETT: Mr. Young is passing out an 21 exhibit. I would like that marked as Exhibit 30, and 22 let's call it Progress Energy Second Quarter Results. 23 (Exhibit 30 was marked for identification.) 24 25 BY MS. BENNETT:

Mr. Portuondo, are you aware that Progress 1 Q. 2 Energy posts company-related press releases on its website? 3 Yes, I am. Α. 4 5 Okay. And have you seen this press release Q. regarding Progress Energy's second quarter earnings? 6 Not this one. Α. 7 The page that was just handed to you was 8 Q. printed from Progress Energy's website this morning. Do 9 you see the third paragraph on this page that begins, 10 the quote, "Our core businesses continue to perform 11 well"? 12 13 Yes, I do. Α. Would you read that paragraph aloud into the 14 Q. record? 15 "'Our core businesses continued to perform 16 Α. well in the second quarter, ' said Bob McGehee, chairman 17 and chief executive officer of Progress Energy. 'With 18 the sale of our energy contracts with the Georgia 19 cooperatives we have completed the last major step in 20 our plan to focus our capital and our attention on 21 meeting the needs of our two growing utilities. We have 22 completed this transition ahead of schedule. More 23 24 important, the results of this initiative have produced 25 a stronger balance sheet, enhanced credit ratings, and

1 have contributed to strong ongoing earnings growth. We 2 believe these actions firmly support our investment 3 objective of offering a reasonable total return with low 4 volatility.'" 5 Thank you. When Mr. McGehee states that the Q. 6 company has completed the last major step in our plan, 7 he's referring to Progress Energy's initiative to divest its nonregulated businesses; is that correct? 8 9 That is correct. Α. 10 Would you agree with Mr. McGehee's remarks Q. 11 that after having successfully divested its nonregulated 12 businesses, Progress Energy is now a better position to 13 fund capital projects of its regulated utilities, 14 including Progress Energy Florida? Yes. It has helped in funding the upcoming 15 Α. capital initiatives of the two utilities. 16 17 MS. BENNETT: Thank you. I have no further 18 questions. 19 CHAIRMAN EDGAR: Mr. Walls, redirect? 20 MR. WALLS: Yes, very briefly. 21 REDIRECT EXAMINATION 22 BY MR. WALLS: 23 Mr. Portuondo, if you would turn back to JP Q. 24 Exhibit -- this JP being Jeff Pollock, not Javier 25 Portuondo. And that's JP Exhibit 2. FLORIDA PUBLIC SERVICE COMMISSION

	6.
1	<b>A.</b> JP-2, page
2	<b>Q.</b> Yes. If you look at page 7 of 8, where the
3	Crystal River 3 uprate was identified in item 90.
4	A. Yes, sir.
5	<b>Q.</b> And you see in the second column it had 24?
6	A. Yes, sir.
7	<b>Q.</b> And if you look back to page 4 of 8, that
8	second column is entitled "MWT." Do you see that?
9	A. I do.
10	<b>Q.</b> If you go to the first page of the document,
11	page 1 of 8, the second sentence says, "The NRC has
12	completed 102 such reviews to date, resulting in a gain
13	of approximately 12,615 MWT (megawatts thermal) or 4,216
14	MWE (megawatts electric) at existing plants." Do you
15	see that?
16	A. I do.
17	<b>Q.</b> So if we look back at the uprate for CR3 on
18	page 8 at 90, item 90, where it says 24 MWT, how many
19	megawatts electric is that?
20	A. Rounded, 8 megawatts.
21	MR. WALLS: Thank you. No further questions.
22	CHAIRMAN EDGAR: Okay. Let's take up the
23	exhibits. I have 24, 29, and 30 offered by staff.
24	MS. BENNETT: Yes, Chairman. We would offer
25	24, 29, and 30 into the record.

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1	CHAIRMAN EDGAR: Any objections?
2	MR. WALLS: No objections.
3	CHAIRMAN EDGAR: No objections? Seeing none,
4	we will enter Exhibits 24, 29, and 30.
5	(Exhibits 24, 29, and 30 were admitted into
6	the record.)
7	CHAIRMAN EDGAR: Any other matters for this
8	witness? Seeing none, the witness is excused. Thank
9	you, Mr. Portuondo.
10	THE WITNESS: Thank you.
11	CHAIRMAN EDGAR: Okay. As noted earlier,
12	Mr. Portuondo is our last witness. Are there any other
13	matters that we should address while we are all gathered
14	here together before we adjourn?
15	Ms. Bennett.
16	MS. BENNETT: I would note for the record that
17	the critical dates for the remainder of this docket are
18	that the hearing transcript will be due August 14th, the
19	briefs August the 28th. And the briefs, according to
20	the Prehearing Order, are not to exceed 40 pages,
21	summaries not to exceed 100 words for each position.
22	The recommendation by staff will be September 27th, and
23	the post-hearing agenda October the 9th.
24	CHAIRMAN EDGAR: Any questions about the dates
25	that Ms. Bennett has relayed to us? No questions.

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Okay. Any other matters? 1 Seeing none, Ms. Bennett, let me confirm, on 2 3 my exhibit list, Exhibit 25. MS. BENNETT: Exhibit 25 we did not enter into 4 the record, nor did we enter Exhibit 23 into the record. 5 CHAIRMAN EDGAR: Okay. That's what I had, but 6 T wanted to make sure. 7 Okay. Commissioner Argenziano. 8 COMMISSIONER ARGENZIANO: I don't know if this 9 is appropriate, but I found out during our meeting that 10 President Ken Pruitt's son died last night, and I just 11 wanted to express my condolences, and maybe that we all 12 just think about his family today. 13 CHAIRMAN EDGAR: Absolutely. Thank you, 14 Commissioner. All of our, I know, thoughts go out to 15 Senator Pruitt, President Pruitt and his family and 16 17 friends. Thank you. And with that, we are adjourned. 18 (Proceedings concluded at 1:15 p.m.) 19 20 21 22 23 24 25 FLORIDA PUBLIC SERVICE COMMISSION

1	CERTIFICATE OF REPORTER
2	
3	STATE OF FLORIDA:
4	COUNTY OF LEON:
5	I, MARY ALLEN NEEL, Registered Professional
6	Reporter, do hereby certify that the foregoing
7	proceedings were taken before me at the time and place
8	therein designated; that my shorthand notes were
9	thereafter translated under my supervision; and the
10	foregoing pages numbered 550 through 633 are a true and
11	correct record of the aforesaid proceedings.
12	I FURTHER CERTIFY that I am not a relative,
13	employee, attorney or counsel of any of the parties, nor
14	relative or employee of such attorney or counsel, or
15	financially interested in the foregoing action.
16	DATED THIS 14th day of August, 2007.
17	
18	na Ollen had
19	MARY ALLEN NEEL, RPR, FPR 2894-A Remington Green Lane
20	Tallahassee, Florida 32308 (850) 878-2221
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	FLORIDA PUBLIC SERVICE COMMISSION

		iensive Exhibi into Hearing I		
Hearing I.D. #	Witness	I.D. # As Filed	Exhibit Description	Entered
Staff				
1		Exhibit List- 1	Comprehensive Exhibit List	
Testimony E.	xhibit List			
PEF				
2	Daniel L.		Aerial view of Crystal River	
	Roderick	DLR-1	Complex, including CR3.	
3	Daniel L.	<u></u>	Photo of primary plant	
	Roderick	DLR-2	configuration for	
			pressurized water reactor	
			nuclear plant at CR3 that	
			shows major components of	
			nuclear reactor and primary	;
4	Daniel L.		coolant system.	
4	Roderick		Schematic of major	
	Rodenck	DLR-3	components in primary	
			system and balance of	
			nuclear plant that shows	
			major components in	
			secondary systems,	
			including main turbine and main generator.	
5	Samuel S.		Amended Summary of	
5	Waters		Annual Fuel Savings of	
	vv ators	SSW-1	Proposed Power Upgrade to	
		(Amended)	CR3.	
6	Samuel S.		Summary of Overall Cost	
J	Waters	SSW-2	Effectiveness of the	
		55 W -2	Proposed Power Upgrade to	
			CR3 to the retail customer.	
7	Javier Portuondo		Excerpt of Schedule B-13 of	
		JP-1	Minimum Filing	
		J <b>I</b> - 1	Requirement submitted in	
			Docket No. 050078-EI.	

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FLORIDA PUBLIC SERVICE COMMISSION DOCKET NO. <u>070052-EIEXHIBIT</u> COMPANY <u>FL Public Service Comm.</u> Staff WITNESS <u>Exhibit List</u> DATE <u>08/07+08/07</u>

	Comprehensive Exhibit List for Entry into Hearing Record					
Hearing 1.D. #	Witness	I.D. # As Filed	Exhibit Description	Entered		
8	Javier Portuondo	JP-2	Excerpt of Schedule B-2 of Minimum Filing Requirement submitted in Docket No. 050078-EI.			
9	Javier Portuondo	JP-3	Excerpt of Schedule B-1 of Minimum Filing Requirement submitted in Docket No. 050078-EI.			
OPC						
10	Patricia W. Merchant	PWM-1	Resume.			
11	Daniel J. Lawton	DJL-1	Resume and Case Listing.			
12	Daniel J. Lawton	DJL-2	Deferred Tax Impact.			
13	Daniel J. Lawton	DJL-3	Net Savings at 7.5% ROR.			
14	Daniel J. Lawton	DJL-4	Cash Flow Comparison.			
15	Daniel J. Lawton	DJL-5	PEF's Proposed Timing.			
FIPUG						
16	Jeffry Pollock		PEF 2006 Surveillance Report.			
17	Jeffry Pollock	JP-2	USNRC Power Uprates.			
18	Jeffry Pollock	JP-3	Impact of Sales Growth.			
19	Jeffry Pollock		CCCR vs. Fuel Clause.			
20			Review of 2006 Ten Year Site Plans dated December 2006.			

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	Comprehensive Exhibit List for Entry into Hearing Record					
Hearing I.D. #	Witness	I.D. # As Filed	Exhibit Description	Entered		
21			Progress Energy Florida Ten Year Site Plans filed on or about April 1 in the years 2005, 2006 and 2007.			
Staff 22			Progress Energy Florida's response to staff Interrogatory (No. 5) in Docket Number 060642 – EI -Crystal River Unit 3 Uprate Need Determination.			
23			Progress Energy Florida's response to Office of Public Counsel Interrogatory (No. 12) in Docket Number 070052.			
24			Late Filed Exhibit (No. 2) of July 24, 2007 deposition of Javier Portuondo in Docket Number 070052.			
25			Staff prepared summary entitled "Prior Application of Item 10 Under Order 14546."			

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3	1	Comprehensive Exhibit List	8	8	
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EXHIBITS NUMBER: ID. ADMTD. SSW-1 SSW-2 JP-1 (Portuondo) JP-2 (Portuondo) JP-3 (Portuondo) JP-1 (Pollock) JP-2 (Pollock) JP-3 (Pollock) JP-4 (Pollock) Extracts from 2005, 2006, and 2007 Ten-Year Site Plans PEF Response to Staff Interrogatory 190 No. 5, Docket 060642-EI 2006 Ten-Year Site Plan 2007 Ten-Year Site Plan Prior Application of Item 10 Under 293 Order 14546 

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2	NUM	BER:				ID	. ADMTD.	
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4	11	DLJ-1	-				548	
5	12	DLJ-2	)				548	
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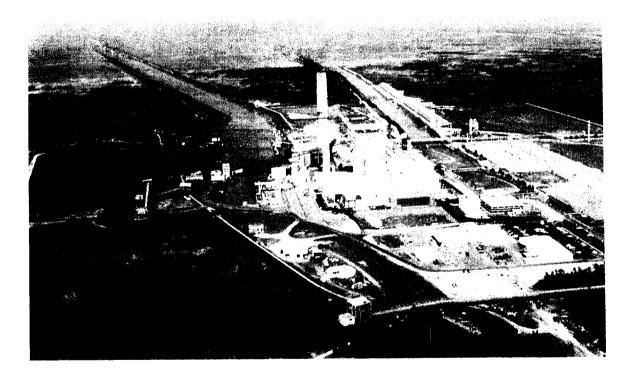
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<b>v</b> .					<b>Vol. 4</b> 552
1		EXHIBITS			
2	NUMB	ER:	ID.	ADMTD.	
3	24	Deferred Tax Impact of Different Recovery Periods	623	632	
4	29	Excel Spreadsheet Showing AFUDC	627	632	
5 6	30	Progress Energy Second Quarter Results	628	632	
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		FLORIDA PUBLIC SERVICE COMMISSIO	N		

.

Docket No. <u>070052</u> Progress Energy Florida Exhibit No. (DLR-1) Page 1 of 1

# Exhibit 1 General Site Layout

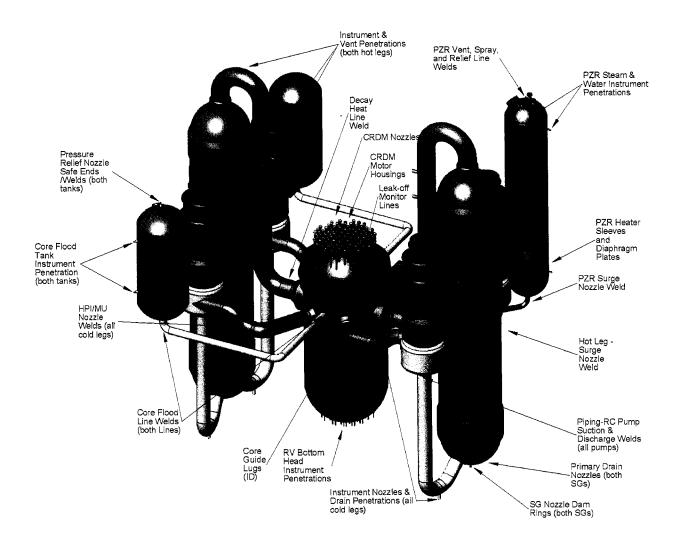


DOCKET NO	0. <u>0'/00;</u>	5271 EXHIBIT		
COMPANY	PE	<u>F</u>		
WITNESS	Dar	07+08	sick	(DLR-1)
DATE	08	07+08	107	-

Docket No. <u>070052</u> Progress Energy Florida Exhibit No. (DLR-2) Page 1 of 1

# Exhibit 2

# **Primary Plant Configuration**

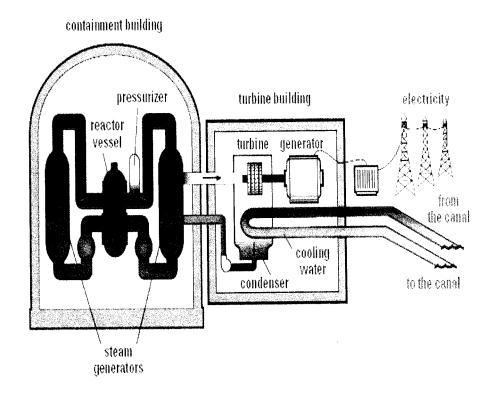


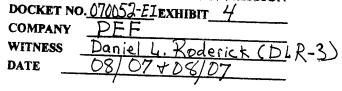
FLORIDA PUBLIC SERVICE COMMISSION DOCKET NO.<u>070052-FI</u>EXHIBIT\_<u>3</u>

COMPANY PEF erick(DLR-2) WITNESS Daniel  $R_r$ 08 07+08 107 DATE

Docket No. <u>070052</u> Progress Energy Florida Exhibit No. (DLR-3) Page 1 of 1

# Exhibit 3 Secondary Plant Interface





### **BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION**

In re: Petition by Progress Energy Florida, Inc.To recover costs of Crystal Rive Unit 3Uprate through fuel clause

Docket No.: 070052

Submitted for Filing: June 29, 2007

### PROGRESS ENERGY FLORIDA, INC.'s NOTICE OF FILING

Progress Energy Florida, Inc. hereby gives notice of filing Amended Exhibit No.

(SSW-1) to the Amended Testimony of Samuel S. Waters filed May 3, 2007.

Respectfully submitted this <u>29<sup>th</sup></u> day of June, 2007.

R. Alexander Glenn Deputy General Counsel PROGRESS ENERGY SERVICE COMPANY, LLC Post Office Box 14042 St. Petersburg, FL 33733-4042 Telephone: (727) 820-5587 Facsimile: (727) 820-5519

X ( )

James Michael Walls Florida Bar No. 0706242 Dianne M. Triplett Florida Bar No. 0872431 CARLTON FIELDS, P.A. Post Office Box 3239 Tampa, FL 33601-3239 Telephone: (813) 223-7000 Facsimile: (813) 229-4133

DOCKET NO	D.070052-EIEXHIBIT_3
COMPANY	PEF
WITNESS	Samuel S. Waters (SSW-1)
DATE	08/07+08/07
	,

#### **CERTIFICATE OF SERVICE**

I HEREBY CERTIFY that a true and correct copy of the foregoing has been furnished to

all counsel of record and interested parties as listed below via electronic mail and U.S. Mail this

Joseph McGlothlin Office of the Public Counsel c/o The Florida Legislature 111 W. Madison St., Room 812 Tallahassee, FL 32399

Administrative Procedures Committee Room 120 Holland Building Tallahassee, FL 32399-1300

Dept. of Community Affairs Charles Gauthier Division of Community Planning 2555 Shumard Oak Blvd. Tallahassee, FL 32399-2100

Department of Environmental Protection Michael P. Halpin 2600 Blairstone Road MS 48 Tallahassee, FL 32301

Lisa Bennett Florida Public Service Commission 2540 Shumard Oak Blvd. Tallahassee, FL 32399-0850

James W. Brew Brickfield, Burchette, Ritts & Stone, P.A. 1025 Thomas Jefferson St., NW Eighth Floor, West Tower Washington, DC 20007-5201 John McWhirter McWhirter Reeves Law Firm 400 N. Tampa Street, Ste. 2450 Tampa, FL 33602

Mike Twomey P.O. Box 5256 Tallahassee, FL 32314

Beth Keating 106 E. College Ave. Ste. 1200 Tallahassee, FL 32301

Fla. Cable Communications Assoc. 246 E. 6<sup>th</sup> Avenue, Ste. 100 Tallahassee, FL 32303

Robert Scheffel Wright 225 S. Adams Street, Ste. 200 Tallahassee, FL 32301

Karin S. Torain PCS Administration (USA), Inc. Suite 400 1101 Skokie Blvd. Northbrook, IL 60062

Amended Exhibit No. \_\_\_\_(SSW-1) Summary of Expected Annual Fuel Savings Due to the Proposed Uprate to Crystal River Unit 3 (System Basis)

PRODUCTION	COST	- NO	UPRATE	

July 2006 Generation & Fuel Forecast - Florida

Annual																		
	2006	2009	2010	2011	2012	2013	2014	2015	2015	2017	2016	2019	2020	2021	2022	2023	2024	2025
Eud																		
Steam-Coal	458,471,678	452,201,421	458,714,726	482,372,702	471,865,842	576,148,977	644,328,435	691,646,114	813,291,655	823,475,802	806,295,425	829,380,939	854,267,444	885,415,940	832,096,525	880,853,792	917,358,012	944,336,299
Steam-Oil	566,845,330	424,501,058	257,438,849	277,297,035	298,800,706	258,796,788	275,506,509	282,512,322	288,667,035	326,770,949	318,469,059	346,929,421	378,108,213	396,859,322	349,089,708	378,282,017	378,723,604	413.387.117
Steam-CC	956,271,147	1,243,813,724	1,092,757,781	1,351,350,740	1,521,014,994	1,440,502,994	1,338,315,975	1,429,907,508	1,356,063,581	1,516,665,004	1,271,842,434	1,482,015,247	1,597,923,456	1,695,354,913	1,393,885,781	1,500,834,205	1,570,892,532	1,744,775,169
ст	265,758,091	276,741,152	218,947,290	256,269,410	261,387,920	259,492,600	256,847,996	277,072,241	276,799,602	311,394,055	308,473,037	319,002,643	350,381,164	356,816,625	341,290,088	350,121,511	358,844,909	378,243,328
Nuclear	31,190,495	24,003,315	35,402,007	32,965,672	37,139,235	34,468,628	38,607,030	35,938,746	40,352,868	41,472,893	96,903,525	94,406,433	101,307,516	103,129,570	163,291,949	161,316,722	170,707,904	168,267,039
Fuel Sub-Total	2,279,536,741	2,421,250,571	2,063,260,653	2,400,255,559	2,590,209,697	2,569,409,987	2,553,605,944	2,717,076,931	2,775,174,942	3,019,778,703	2,801,963,480	3,071,734,683	3,281,987,792	3,440,576,370	3,079,655,050	3,271,408,249	3,395,526,962	3,649,008,953
NH3	1,276,691	3,611,243	4,056,308	4,119,150	3,939,519	5,181,268	5,948,184	6,396,978	8,024,030	7,894,221	7,783,016	7,764,748	7,854,788	8,153,742	7,441,142	7,655,641	7,916,296	7,875,546
<u>CaC03</u>		1,097,713	10,389,108	10,958,897	10,859,563	14,461,966	16,913,466	18,491,855	23,392,313	23,389,627	23,429,143	23,711,725	24,406,957	25,738,676	23,828,422	24,893,599	26 157 511	26,407,342
Pur Pwr																		
Cogen	452,354,399	450 187,054	504,884,151	522,967,867	539,522,120	542,486,721	490,959,375	504,594,212	519,650,142	539,602,740	546,562,196	568,909,689	588,879,617	609,925,477	620,138,388	647,973,969	595,031,554	483,202,534
Tran-Purc	352,457,985	337,972,117	328,132,018	261,802,331	267,735,792	247,069,404	241,173,165	258,526,016	211,465,363	232,653,443	113,827,016	116,980,833	124,009,563	125,812,887	113,739,446	116,041,938	117,718,827	121,638,242
Pur Pwr Sub-Total	804,812,384	788,159,171	633,016,168	764,790,197	607,257,912	789,556,125	732,132,540	763,120,228	731,115,505	772,256,182	660,389,212	685,890,522	712,889,180	735,738,364	733,877,833	764,015,907	712,750,381	605,040,776
TOTAL EXPECTED FUEL COST WOUT UPRATE	3,085,625,815	3,214,128,798	2,918,732,237	3,210,123,804	3,412,258,690	3,378,609,365	3,308,600,134	3,505,085,992	3,537,706,790	3,823,318,734	3,493,584,851	3,789,101,678	4,027,138,717	4,210,207,152	3,844,802,448	4,867,973,396	4,143,351,250	4,288,332,616

PRODUCTION COST - 180MW CR3 UPRATE

Based on July 2006 Generation & Fuel Forecast - Florida

based on Sury 2000 Generation &	-uerrorecasi - m	unua																
Annual																		
	2008	2099	2910	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2923	2024	2025
Eud																		
Steam-Coal	457,700,683	451,867,549	457,658,230	481,424,948	466,134,327	569,051,047	633,872,055	681,200,156	802,055,798	812,123,154	791,060,131	817,351,459	840,899,768	871,081,965	816,704,054	866,959,318	900,631,510	930,805,555
Steam-Oil	564,825,772	423,125,575	254,783,678	275,267,515	280,334,402	250,026,430	263,746,701	274,715,992	280,875,947	316,843,04Z	311,569,856	338,906,849	368,239,597	382,885,755	342,562,616	371,742,166	370,473,847	403,806,640
Steam-CC	951,615,337	1,239,938,348	1,077,834,349	1,330,424,989	1 459 426 572	1,377,177,151	1,276,682,273	1,371,129,674	1,283,274,674	1,451,623,410	1,195,455,319	1,403,795,615	1,509,116,136	1,626,893,737	1,305,328,649	1,419,207,273	1,484,201,558	1,658,747,266
ст	266,293,813	276,165,291	218,213,679	255,400,695	256,166,674	256,767,127	253,082,921	272,426,180	273,812,528	305,374,296	305,702,842	315,489,838	344,843,797	349,792,045	339,210,506	346,282,162	355,257,086	372,142,506
Nuclear	31,669,833	24,413,908	37,215,459	35,215,195	45,699,896	42,417,150	47,506,290	44,225,294	49,654,377	50,019,714	106,328,566	103,228,769	111,235,960	112,327,638	173,301,168	170,607,278	181,161,671	178,071,918
Fuel Sub-Total	2,272,305,438	2,415,510,670	2,045,715,395	2,377,733,342	2,507,761,970	2,495,438,905	2,474,890,240	2,643,697,296	2,689,673,323	2,935,983,616	2,710,116,713	2,978,772,529	3,174,335,278	3,342,981,140	2,977,106,992	3,174,798,196	3,291,725,671	3,543,573,906
<u>NH3</u>	1,274,970	3,609,694	4,061,887	4,114,563	3,908,812	5,138,649	5,870,269	6,323,730	7,929,345	7,800,660	7,648,082	7,661,578	7,743,897	8,023,139	7,316,458	7,544,761	7,782,571	7,771,744
CaCO3		1,097,855	10,377,818	10,946,699	10,774,899	14,342,015	16,690,853	18,279,043	23,114,322	23,109,758	23,022,330	23,396,563	24,061,842	25,325,239	23,428,717	24,532,297	25,715,791	26,058,857
Pyr.Pwr	-	-		-				-				-	-		-			
Cogen	452,403,906	450,016,314	504,658,513	522,896,958	538,401,433	541,699,297	489 194 592	502,613,440	517,702,537	538,083,299	543,306,979	566,386,801	586,427,989	606,856,275	616,570,178	645,162,313	590,076,265	478,917,073
Tran-Purc	351,735,190	337,562,570	325,680,792	258,561,354	254,789,569	236,519,700	233,415,403	249,912,115	202,975,747	224,566,047	112,628,600	113,893,254	120,418,415	122,152,784	111,960,535	113,673,604	114 981 480	117,944,397
Pur Pwr Sub-Total	804,139,096	787,598,884	830,339,305	781,458,312	793,191,002	778,218,997	722,609,996	752,525,554	720,678,284	762,649,345	655,935,578	680,280,055	706,646,403	729,009,059	728,530,713	758,835,917	705,057,745	596,861,471
TOTAL EXPECTED FUEL COST W UPRATE	3,077,719,504	3,207,817,103	2,890,494,404	3,174,252,917	3,315,636,682	3,293,138,566	3,220,061,358	3,420,825,623	3,441,395,275	3,729,543,380	3,396,722,703	3,690,110,725	3,912,987,421	4,105,338,577	3,736,382,879	3,965,711,172	4,838,281,777	4,174,265,978
EXPECTED FUEL SAVINGS DUE TO UPRATE	\$7,906,311	\$6,311,695	\$20,237,833	\$25,670,687	\$96,630,008	\$85,470,799	588,538,776	\$84,260,369	\$96,311,515	\$93,775,354	\$96,862,148	\$98,990,953	\$114,151,296	\$104,868,576	\$186,419,569	\$102,262,224	\$113,069,473	\$114,066,638

TOTAL GROSS SAVINGS THROUGH 2025 \$1,458,004,422

TOTAL GROSS SAVINGS THROUGH 2036 \$2,677,797,560

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 $\mathbf{v}$ 

Docket No. 070052 Progress Energy Florida Exhibit No. \_\_\_\_ (SSW-2) Page 1 of 1

#### Exhibit No.\_\_\_(SSW-2)

### Summary of Overall Cost Effectiveness of the Proposed Upgrade to Crystal River Unit 3 to the Retail Customer

NPV Costs, (000's) in 2006 \$'s	\$320,369
NPV Benefits, (000's) in 2006 \$'s	\$639,844
Net Benefit to Retail Customers, (000's) in 2006 \$'s	\$319,475

## FLORIDA PUBLIC SERVICE COMMISSION

DOCKET NO	D.070052-EIEXHIBIT
COMPANY	GEF
WITNESS	Samuel S. Waters (SSW-2)
DATE	08/07+08/07

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 DOCKET NO.	070052
PROGRESS EN	VERGY FLORIDA
EXHIBIT NO.	(JP-1)
PAGE 1 OF 1	,

		_			CONCTRUCTION						I AOD I		
SCHE	CULE 9-1:	3			CONSTRUCTION W	JAN 17 LUCAUE99							
FLORI	DA PUBLI	C SERVICE COMMISSION		Explanation	For each major const	uction project whose	cost of completion		Type of Data Shown:				
					exceeds 0.2 percent (	.002) of gross plant, a	and for smaller proj						
Сотра	eny: PROG	RESS ENERGY FLORIDA INC.		within each calegory :	shown laken as a gro	up, provide the				Projected Test Ye		26	
				requested data conce	ming projects for the	lest year.				Price Year Ended			
Cockel	No. 0500	78-EI									Historical Test Yea		
											Wilness: Portuond DeSouza / Slusse		-
	(A)	(8)	(C)	(D)	(E)	(F)	(G)	(11)	(1)	(J)	(K)	(L)	(M)
			Year End	Estimated	Total	Initial Project	Date	Expected	Percent	Amount of	13 Month		
Line	Project	Project	CWIP	Add !ional	Cost of	Budget Per	Construction	Completion	Complete	AFUCC	Average	Jurisciclional	Jansdictional
No.	No	Description	Balance	Project Costs	Completion	Construction Bid	Starled	Date	(C):(E)	Charged	Balance	Faclor	Arnouni
1													
2		STEAM PRODUCTION											
3		Major Projects:	L.										
4		Crystal River Coal Yard Upgrade	34,252	51,418	85.670	35,670	Mar-05	Dec-07	40.0%	0	16,142		
5													
õ		Miner Projects:	12,471								11,251		
7		Total Steam Projects	46,723	51,418	85,670	85,670				•	27,393		
8													
9		NUCLEAR PRODUCTION											
10		Major Projects:	67.000	.70 954	070 770	170.020				0	47,117		
11		CR3 Steam Generator Replacement	57,986	172,364	230,350	170,000				0	47,117		
12 13		Minor Projects:	3,168								3,357		
14		Total Nuclear Projects	61.155	172,354	230,350	170,003					50,484		
15			005		200,000	110,050							
16		HYDRAULIC PRODUCTION											
17		none											
18													
19		OTHER PRODUCTION											
20													
21		Hines unit 3	597	•	247,500	226,500	Jan-02	Dec-05	100.0%	•	524		
22		Hines unit 4	145,190	76,310	221,500	221,500	<b>J</b> นก-04	Dec-07	65.5%	7,667	98,266		
23		Subtetal Major Projects	\$45,787	76,310	469,000	448,000				7,667	98,790,		
24													
25		Minor Projects:	8,903								7,848		
26		Total Other Projects	154,690	76,310	469,000	448,000				7,667	:05,638		
27													

Supporting Schedules:

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Recap Schedules:

FLORIDA PUBLIC SERVICE COMMISSION

DOCKET NO. D7005J-FTEXHIBIT 7 PEF COMPANY Javier Portuondo (JP-1) 08/07+00/000 WITNESS DATE

R 2005 Rate Case:MERIMERs - 2005 HATE CASE/Supmined/8/8-13\_4/20/2005\_131 PM

## FLORIDA PUBLIC SERVICE COMMISSION

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DOCKET NO	. <u>070057-E</u> exhibit	
COMPANY	GEF	
WITNESS	Janier Portwords (JP-2	1)
DATE	08107408107	/

### DOCKET NO. 070052 PROGRESS ENERGY FLORIDA EXHIBIT NO. (JP-2) PAGE 1 OF 1

SCHEDUL	E B-2	RATE BASE ADJUSTMENTS		PAGE I OF I	
(LCRIDA)	PURLIC SERVICE COMMISSION	Explanation: List and explain all proposed adjustments to tr	re 13-month average rate base	Typa of I	Cala Shown.
		for the test year, the prior year and the most re			
`amaana	DEOGRESS ENERGY ELORIDA INC	adjustments includes in the last case that are		X Projecter	d Test Year Ended 12/31/200
Company: PROGRESS ENERGY FLORIDA INC.		that are not proposed in the current case and the reasons for excluding them.		Prior Yes	
	01000 (1	and are not proposed in the content table and	the reasons for exclosing when		e Test Year Ended 12/31/200
JCCKEL NO	. 050078-61				Perlaando / Slusser
	(A)	(B)	(C)	(2)	(E)
					Jurisdesional
					Amount of
			Acjustment		Adjustment
Line		Reason for Adjustment or Omission	Amount	Juristotional	{1} x (2)
NO.	Adjustment Tille	(provide supporting schedule)	(000)	Facler	(000)
;	Adjustments to System Per Books:				
2	Remove ARO	(?)	\$352,555	N/A	
3	Remove ECCR	(2)	7,749	N/A	
4	Remove ECRC	(3)	(19,255)	N/A	
5	Remove Fuel	{ <sup>2</sup> }	(44,574)	N/A	
5	Remove SCRC	(5)	(139,002)	N:A	
7	Remove NUP	(6)	(8.034)	N9A	
8	Remove Above Market Alfiliate Transfer	(7)	(23,361)	N/A	
9	Remove Job Orders	(6)	26,557	N/A	
10	Remove Sebring	(9)	(3.684)	N/A	
11	Remove Nucl Decom Trust Urveal Gains	(10)	E3,101	N/A	
12	Remove AD Nuc Decom Funded	(11)	61,097	N/A	
13	Remove Other Special Funds (126)	(12)	(476,913)	NA	
14	Misc Adjustment	(13)	(34)	NA	
15			(\$159,058)		
<b>16</b>	Company/FPSC Adjustments:				
17	Company Adjustment - Distrib Emancement Projects	1145	\$5.521	0.99757	\$3,509
15	Company Adjustment - Transm Enhancement Projects	:15]	7,439	0.71418	5,313
19	Company Adjustment - End of Life Nuclear M&S	(16)	403	1.00000	409
20	Company Adjustment - Charging Practices	(17)	(51,468)	0.99760	(51,345)
21	Company Adjustment - Fossi: Dismantiement	(13)	(5,606)	0 83972	(4.986)
22	Company Adjustment - Last Core Nuclear Fuel	(19)	168	1.00000	\$66
23	Company Adjustment - Mobile Meter Reading	(20)	55,554	1 00000	55,554
24	Company Adjustment - Organization Realignment	(2):	(51,174)	0 92422	(47,296)
25	Company Adjustment - Progress Fue's Curp	(22)	28,33/	0.91126	25,868
26	Company Adjustment - Rate Case	(23)	2,250	1.00000	2,250
27	Company Adjustment - Storm Reserve	(24)	(22,007)	0,96345	(21,325)
28	CWIP - AFUDC	(25)	(145,315)	0 92471	(134.637)
29	Gaiviess on sale of plant	(26)	(127)	0.93176	(119)
30	Nuc, Decem Unfunded - Wholesala	(27)	2,286	1.00000	2,225
31	RIO Start-up Costs	(28)	(1,173)	0.96943	(3,79*)
32	Section 1341 Income Tax Adj	(29)	1,407	0.92577	1,303
33			(\$173,542)		(\$162,051)
34	Note: Differences are due to rounding		_		

Supporting Schedules:

Recap Schedules:

FLORIDA	FLORIDA PUBLIC SERVICE COMMISSION DOCKET NO. 070052-EPEXHIBIT				
DOCKET NO					
COMPANY	GEF				
WITNESS	Javier Portuondo (JP-2.				
DATE	08/07 7 08/07				

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## DOCKET NO. <u>070052</u> PROGRESS ENERGY FLORIDA EXHIBIT NO. <u>(JP-3)</u> PAGE 1 OF 1

SUMECULE 8-1			ADDUSTED HATE BASE								
FLORIDA PUBLIC SERVICE COMMISSION Explanation		xplanation	Provide a schedule of the 13 month average acusted rate base			<del></del>	Type of Data Shown:				
			lor the lest year, i	he prior year and	the most recent	hstorical year.					
Company: PROGRESS ENERGY FLORIDA INC.		1	Provide the detail	s of all adjustmen	sis on Schedule	B-2.		<u>x</u> (	Projected Test Ye	ear Ended	12/31/20
									Prior Year Ended		12/31/20
Docket No. 050078-EI								_!	listorical Test Ye	ar Ended	12/31/20
								,	Nitness: Portuon	do / Siusser	
	(A)	(8)	(C)	(C)	(E)	(F)	(G)	(11)		(L)	
	(14)	Accumulated	(C)	(C)	(c)	(r)	(5)	64	17	(5)	
		Provision for	Net Plant		Plant	Nuclear Fuel -	Net	Working	Other	īciai	
tre .	Plant in	Cepreciation &	in Service	CWIP -	Held for	No AFUDC	UNKY	Capital	Aate Base	Pate	
No	Service	Americation	(A-B)	No AFUDC	Future Use	(Net)	Plant	Alowance	terns	Base	
1 System Fer Books (B-3)	\$9,197,605	\$4,490,733	\$4,706,873	\$244,471	\$7,921	\$53,933	\$5,023,193	\$443,248		35,436,446	;
2 Adustments to System Per Books:	35.127,000	34,430,733	34,103,013	3244,471	V1,201	\$30,000	40,010,123	2110,210		•••	
3 Planove ARO	(77.065)	(43,697)	(33,365)				(33,368)	385,972		352,555	5
4 Hemove ECCR	(*C3) (*C3)	(13)	(395) (395)				(395)	8,144		7,749	
5 Remove ECRC	(2,372)	(13)	(395) (2,221)				(2,221)	(17,044)		(19,265	
5 Remove EURI	(2,372)	(151)	(2,221)				(2,221) (1,632)	(43,542)		(44,574	
7 Remove SCAC	(1.032)	0	12021				(1,032) G	(139,000)		(139,000	
	(19,042)						(8,094)	(133,000)		(0.094	
		(19,948)	(8.094)							(23,351	
9 Remove Above Market Allilate Transfer	(23,361)		(23,351)				(23,351)				
10 Fiemove Job Orders			0				0	25,557		26,557	
11 Remove Setting			C				0	(9.664)		(9,66) 10,101	
12 Remove Nucl Decom Trust Urreal Gains			0				0	63,101		23,10	
13 Remove AD Nuc Decom-Funded		(61,897)	51,097				61,897			61,897	
14 Remove Other Special Funds (128)			0				0	(476,913)		(476,91)	
15 Miss Adjustment	0.071.001		0		7.024		0	(34)		(34	-
16 Adjusted System per Books 17 Junisdictional Factors	9,074,325 0 92671	4,374,026	4,700,299	244,471	7,921	63,933	5,016,624	262,/64	0	5,277,28	
17 Julisdokonal Per Books		0 93950	0.91472	79858.0	0.76420	0.39802	0 91301	0 85239		0,9100	
	6,409,264	4,109,825	4,299,439	217,327	5,054	57,413	4,580,233	222,270	9	4,302,503	3
19 Jurischtenal Company/FPSC Adjustments:	7.001				_						•
20 Company Adjustment - Distrib Enhancement Projects	7,281	105	7 176	1,324	0		8,500	Ð		8,50	
21 Company Adjustment - Transm Enhancement Projects	4,530	44	4,489	324	C		5,313	0		5,31	
22 Company Adjustment - End of Life Nuclear M&S	0	9	0	0	0		C	.409		43	
23 Company Adjustment - Charging Practices	(50,631)	{1,789}	(49,812)	12,533)	0		(51,345)	0		(51,34)	
24 Company Adjustment - Fossil Dismandravent	0	4,903	(4.958)	0	Û	0	(4,989)	c		(4,98	
25 Company Adjustment - Last Core Nuclear Fuel	9	0	Q	0	0	0	0	166		1 <del>6</del>	
26 Company Adjustment - Mobile Meter Reading	(3,385)	(58,940)	55,554	G	ð	5	55,554	0		55,55	
27 Company Adjustment - Organization Realignment	(3,858)	o	(3,858;	0	0	-	(3,855)	(43-43B)		(47,29	
28 Company Adjustment - Progress Fuels Corp	3	0	0	0	0	9	0	25,668		25,55	
29 Company Adjustment - Rate Case	G	0	0	0	0	0	0	2,250		2,25	
30 Company Adjustment - Storm Reserve	o	0	0	0	0	0	σ	(21,328)		(21,32	
31 CWIP - AFUDC	0	0	e	(134,837)	0		(:34,837)	0		(134,83	
32 Gaintoss on sale of plant	9	Q	G	9	0		0	(11a)		(::	
33 Nuc. Decom. Unfonded - Wholesale	9	(2,285)	2,266	0	0	-	2,289	6		2,23	
34 RfD Start-up Costs	0	อ	0	3	0		0	(3,791)		(3.79	
35 Section 1341 Income Tax Adj	0	9	<u> </u>	0	0		0	1,303		1,39	
36 Total Adjustments	(46,031)	(57,379)	11,848	(135,222)	0		(123,374)	(33,577)	0	(162,05	
37 Junsdictional Adjusted Rate Base	\$8,363,253	\$4,051,945	\$4,311,267	\$92,105	\$8,054	\$57,413	\$4,455,859	\$163,593		\$4,640,45	2

ADJUSTED BATE BASE

Succotting Schedules:

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SCHECULE 8-1

Recap Schedules.

Docket No. 070052-EI Resume of Patricia W. Merchant Exhibit \_\_\_\_ (PWM-1) Page 1 of 3

## Resume

## PATRICIA W. MERCHANT, CPA

Office of Public Counsel Room 812, 111 West Madison Street Tallahassee, Florida 32399-1400 Phone: 850-487-8245 Fax: 850-488-4491 E-mail: merchant.tricia@leg.state.fl.us

## **Professional Experience:**

## March, 2005 to Present

## Office of Public Counsel – Senior Legislative Analyst

In my current position, I perform financial and accounting analysis and reviews, and provide testimony, as required, involving utility filings before the Florida Public Service Commission on behalf of the Citizens of the State of Florida.

## 1981 to February, 2005 - Florida Public Service Commission

## 2000 to February, 2005

Public Utilities Supervisor – File and Suspend Rate Case Section, Bureau of Rate Filings, Division of Economic Regulation

In this capacity I supervised 5 to 8 regulatory professionals. This section performed financial, accounting, engineering and rate review and evaluation of rate proceedings for large water and wastewater utilities, as well as electric and gas utilities regulated by the Commission. The types of cases included file and suspend rate cases, limited proceedings, overearning investigations, annual report reviews, service availability and tariff filings, rulemaking, and customer complaints. The section reviewed utility filings, requested and reviewed Commission staff audits, and generated and analyzed discovery requests. I coordinated and prepared staff recommendations to the Commission for agenda conferences. I reviewed the analyses and written documentation of all analysts in this section for proper regulatory theory, grammar and accuracy. I also made presentations to customer groups at Commission staff customer meetings for the rate proceedings to which I was assigned. We presented recommendations at agenda conferences, providing responses to comments and questions by other parties and Commissioners. I also prepared and presented testimony, and assisted in the preparation of cross-examination questions for depositions and formal hearings. Additionally, I provided training in regulatory theory for new staff and provided training on regulatory and accounting issues for other analysts at the Commission.

FLORIDA DOCKET N	PUBLIC SERVICE COMMISSION 10.070052-Elexhibit 10
COMPANY	OPC
WITNESS	Patricia W. Merchant (PWM-1) 08/077-08/07
DATE _	08/07/4-08/07

1

## 1989 - 2000

Regulatory Analyst Supervisor, Accounting Section, Bureau of Economic Regulation, Division of Water and Wastewater

I supervised 5-7 regulatory accounting analysts. This section performed the same job activities as above specifically for the larger Commission regulated Class A and B water and wastewater companies.

## 1983 – 1989

Regulatory Analyst – Accounting Bureau, Division of Water and Wastewater

As an accounting analyst, I performed the same job activities as described above for water and wastewater companies in a non-supervisory role.

## 1981 - 1983

Public Utilities Auditor, Division of Auditing and Financial Analysis

As an auditor in the Tallahassee district of the Commission, I performed financial and accounting audits of electric, gas, telephone, water and wastewater utilities under the Commission's jurisdiction.

## **Education and Professional Licenses**

**1981** Bachelor of Science with a major in accounting from Florida State University

**1983** Received a Certified Public Accountant license in Florida

## List of Cases in which Testimony was Submitted

Dockets Before the Florida Public Service Commission:

060162-EI – Petition by Progress Energy Florida, Inc. to recover modular cooling tower costs through the Environmental Cost recovery clause. (filed testimony stipulated into record)

050958-EI – Petition for approval of new environmental program for cost recovery through Environmental Cost Recovery Clause by Tampa Electric Company. (testified at hearing)

060658-EI - Petition on Behalf of Citizens of the State of Florida to require Progress Energy Florida, Inc. to Refund Customers \$143 million. (filed testimony stipulated into record)

060362-EI - Petition to Recover Natural Gas Storage Project Costs through Fuel Cost Recovery Clause, by Florida Power & Light Company. (testified at hearing)

050045-EI - Petition for Rate Increase by Florida Power & Light Company. (filed testimony, deposed, case settled prior to hearing)

991643-SU - Application for Increase in Wastewater Rates in Seven Springs System in Pasco County by Aloha Utilities, Inc. (testified at hearing)

971663-WS - Application of Florida Cities Water Company, Inc. for a limited proceeding to recover environmental litigation costs. (all testimony and exhibits stipulated into record without hearing)

940847-WS - Application of Ortega Utility Company for increased water and wastewater rates. (testified at hearing)

911082-WS - Water and Wastewater Rule Revisions to Chapter 25-30, Florida Administrative Code. (testified at hearing)

881030-WU - Investigation of Sunshine Utilities of Central Florida rates for possible over earnings. (testified at hearing)

850151-WS - Application of Marco Island Utilities, Inc. for increased water and wastewater rates. (testified at hearing)

850031-WS - Application of Orange/Osceola Utilities, Inc. for increased water and wastewater rates in Osceola County (testified at hearing)

840047-WS - Application of Poinciana Utilities, Inc. for increased water and wastewater rates (testified at hearing)

Cases Before the Division of Administrative Hearings:

97-2485RU - Aloha Utilities, Inc., and Florida Waterworks Association, Inc., Petitioners, vs. Public Service Commission, Respondents, and Citizens of the State of Florida, Office of Public Counsel, Intervenors (deposed and testified at hearing)

DOCKET NO. 070052-EI Resume and Case Listing Exhibit (DJL-1) Page 1 of 6

# DANIEL J. LAWTON PRINCIPAL, DIVERSIFIED UTILITY CONSULTANTS, INC. B.A. ECONOMICS, MERRIMACK COLLEGE M.A. ECONOMICS, TUFTS UNIVERSITY

Prior to beginning his own consulting practice, Diversified Utility Consultants, Inc., in 1986, Mr. Lawton had been in the utility consulting business with a national engineering and consulting firm. In addition, Mr. Lawton has been employed as a senior analyst and statistical analyst with the Department of Public Service of Minnesota. Prior to Mr. Lawton's involvement in utility regulation and consulting he taught economics, econometrics, statistics and computer science at Doane College.

Mr. Lawton has conducted numerous financial and cost of capital studies on electric, gas and telephone utilities for various interveners before local, state and federal regulatory bodies. In addition, Mr. Lawton has provided studies, analyses, and expert testimony on statistics, econometrics, accounting, forecasting, and cost of service issues. Other projects in which Mr. Lawton has been involved include rate design and analyses for electric, gas and telephone utilities. Mr. Lawton has developed software systems, databases and management systems for cost of service analyses.

In addition, Mr. Lawton has developed and reviewed numerous forecasts of energy and demand used for utility generation expansion studies as well as municipal financing. Mr. Lawton has represented numerous municipalities as a negotiator in utility related matters. Such negotiations ranged from the settlement of electric rate cases to the negotiation of provisions in purchase power contracts.

A list of cases in which Mr. Lawton has provided testimony is attached.

FLORIDA PUBLIC SERVICE COMMISSION DOCKET NO.070052-FIEXHIBIT COMPANY 090 awton (DJL-1) WITNESS Daniel J. DATE 7408107

DOCKET NO. 070052-EI Resume and Case Listing Exhibit\_\_\_\_\_ (DJL-1) Page 2 of 6

# UTILITY RATE PROCEEDINGS IN WHICH TESTIMONY HAS BEEN PRESENTED BY DANIEL J. LAWTON

# JURISDICTION/COMPANY DOCKET NO. TESTIMONY TOPIC

ALASKA REGULATORY COMMISSION					
Beluga Pipe Line Company P-04-81 Cost of Capital					
FEDERA	AL ENERGY REGULATO	DRY COMMISSION			
Alabama Power Company	ER83-369-000	Cost of Capital			
Arizona Public Service Company	ER84-450-000	Cost of Capital			
Florida Power & Light	EL83-24-000	Cost Allocation, Rate Design			
Florida Power & Light	ER84-379-000	Cost of Capital, Rate Design, Cost of Service			
Southern California Edison ER82-427-000		Forecasting			
LOUISIANA PUBLIC SERVICE COMMISSION					
Louisiana Power & Light	U-15684	Cost of Capital, Depreciation			
Louisiana Power & Light	U-16518	Interim Rate Relief			
Louisiana Power & Light	U-16945	Nuclear Prudence, Cost of Service			
	MINNESOTA PUBLIC UTILITIES CO				
Continental Telephone	P407/GR-81-700	Cost of Capital			
Interstate Power Co.	E001/GR-81-345	Financial			
Montana Dakota Utilities	G009/GR-81-448	Financial, Cost of Capital			
New ULM Telephone Company	P419/GR81767	Financial			
Norman County Telephone	P420/GR-81-230	Rate Design, Cost of Capital			
Northern States Power	G002/GR80556	Statistical Forecasting, Cost of Capital			
Northwestern Bell	P421/GR80911	Rate Design, Forecasting			

DOCKET NO. 070052-EI Resume and Case Listing Exhibit\_\_\_\_\_ (DJL-1) Page 3 of 6

		Page 3 of 6
	NORTH CAROL UTILITIES COMMI	
North Carolina Natural Gas	G-21, Sub 235	Forecasting, Cost of Capital, Cost of Service
	OKLAHOMA PUBLIC SERVICE COM	
Arkansas Oklahoma Gas Corporation	200300088	Cost of Capital
Public Service Company of Oklahoma	200600285	Cost of Capital
	PUBLIC SERVICE COMI INDIANA	MISSION OF
Kokomo Gas & Fuel Company	38096	Cost of Capital
	PUBLIC UTILITY COMN NEVADA	AISSION OF
Nevada Bell	99-9017	Cost of Capital
Nevada Power Company	99-4005	Cost of Capital
Sierra Pacific Power Company	99-4002	Cost of Capital
	UBLIC SERVICE COM	MISSION OF
PacifiCorp	04-035-42	Cost of Capital
	SOUTH CAROL PUBLIC SERVICE COM	
Piedmont Municipal Power	82-352-E	Forecasting
	PUBLIC UTILITY COMN TEXAS	AISSION OF
Central Power & Light Company	6375	Cost of Capital, Financial Integrity
Central Power & Light Company	9561	Cost of Capital, Revenue Requirements
Central Power & Light Company	7560	Deferred Accounting
Central Power & Light Company	8646	Rate Design, Excess Capacity
Central Power & Light Company	12820	STP Adj. Cost of Capital, Post Test-year adjustments, Rate Case Expenses
Central Power & Light Company	14965	Salary & Wage Exp., Self-Ins. Reserve, Plant Held for Future use, Post Test Year Adjustments, Demand Side Management, Rate Case Exp.
Central Power & Light Company	21528	Securitization of Regulatory Assets
El Paso Electric Company	9945	Cost of Capital, Revenue Requirements, Decommissioning Funding
El Paso Electric Company	12700	Cost of Capital, Rate Moderation Plan, CWIP, Rate Case Expenses

DOCKET NO. 070052-EI Resume and Case Listing Exhibit\_\_\_\_\_(DJL-1) Page 4 of 6

		Page 4 of 6
Entergy Gulf States Incorporated	16705	Cost of Service, Rate Base, Revenues, Cost of Capital, Quality of Service
Entergy Gulf States Incorporated	21111	Cost Allocation
Entergy Gulf States Incorporated	21984	Unbundling
Entergy Gulf States Incorporated	22344	Capital Structure
Entergy Gulf States Incorporated	22356	Unbundling
Entergy Gulf States Incorporated	24336	Price to Beat
Gulf States Utilities Company	5560	Cost of Service
Gulf States Utilities Company	6525	Cost of Capital, Financial Integrity
Gulf States Utilities Company	6755/7195	Cost of Service, Cost of Capital, Excess Capacity
Gulf States Utilities Company	8702	Deferred Accounting, Cost of Capital, Cost of Service
Gulf States Utilities Company	10894	Affiliate Transaction
Gulf States Utilities Company	11793	Section 63, Affiliate Transaction
Gulf States Utilities Company	12852	Deferred acctng., self-Ins. reserve, contra AFUDC adj., River Bend Plant specifically assignable to Louisiana, River Bend Decomm., Cost of Capital, Financial Integrity, Cost of Service, Rate Case Expenses
GTE Southwest, Inc.	15332	Rate Case Expenses
Houston Lighting & Power	6765	Forecasting
Houston Lighting & Power	18465	Stranded costs
Lower Colorado River Authority	8400	Debt Service Coverage, Rate Design
Southwestern Electric Power Company	5301	Cost of Service
Southwestern Electric Power Company	4628	Rate Design, Financial Forecasting
Southwestern Electric Power Company	24449	Price to Beat Fuel Factor
Southwestern Bell Telephone Company	8585	Yellow Pages
Southwestern Bell Telephone	18509	Rate Group Re-Classification

DOCKET NO. 070052-EI Resume and Case Listing Exhibit\_\_\_\_\_\_(DJL-1) Page 5 of 6

	Page 5 of 6
13456	Interruptible Rates
11520	Cost of Capital
14174	Fuel Reconciliation
14499	TUCO Acquisition
19512	Fuel Reconciliation
9491	Cost of Capital, Revenue Requirements, Prudence
10200	Prudence
17751	Rate Case Expenses
21112	Acquisition risks/merger benefits
9300	Cost of Service, Cost of Capital
11735	Revenue Requirements
21527	Securitization of Regulatory Assets
7510	Cost of Capital, Cost of Service
13369	Rate Design
RAILROAD COMMIS TEXAS	SSION OF
5793	Cost of Capital
8205	Cost of Capital
9002-9135	Cost of Capital, Revenues, Allocation
8664	Rate Design, Cost of Capital, Accumulated Depr. & DFIT, Rate Case Exp.
8935	Implementation of Billing Cycle Adjustment
6968	Rate Relief
8878	Test Year Revenues, Joint and Common Costs
9465	Cost of Capital, Cost of Service, Allocation
8976	Cost of Capital, Capital Structure
9145-9151	Cost of Capital, Transport Fee, Cost Allocation, Adjustment Clause
9400	Cost of Service, Allocation, Rate Base, Cost of Capital, Rate Design
	111520         14174         14499         19512         9491         10200         17751         21112         9300         11735         21527         7510         13369         RAILROAD COMMIS TEXAS         5793         8205         9002-9135         8664         8935         6968         8878         9465         8976         9145-9151

DOCKET NO. 070052-EI Resume and Case Listing Exhibit\_\_\_\_\_(DJL-1)

		Page 6 of 6
Westar Transmission Company	4892/5168	Cost of Capital, Cost of Service
Westar Transmission Company	5787	Cost of Capital, Revenue Requirement
	TEXAS WATER COMMIS	SION
Southern Utilities Company	7371-R	Cost of Capital, Cost of Service
	SCOTSBLUFF, NEBRA COUNCIL	ISKA CITY
K. N. Energy, Inc.		Cost of Capital
	HOUSTON CITY COUNC	
Houston Lighting & Power Company		Forecasting
PUB	LIC UTILITY REGULAT EL PASO, TEX	
Southern Union Gas Company		Cost of Capital
	DISTRICT COL CAMERON COUNTY	
City of San Benito, et. al. vs. PGE Gas Transmission et. al.	96-12-7404	Fairness Hearing
	DISTRICT COU HARRIS COUNTY,	The second se
City of Wharton, et al vs. Houston Lighting & Power	96-016613	Franchise fees
	DISTRICT COL	
	TRAVIS COUNTY,	TEXAS
City of Round Rock, et al vs. Railroad Commission of Texas et al	GV 304,700	Mandamus

## FLORIDA PUBLIC SERVICE COMMISSION

DOCKET NO	D.070052-ET EXHIBIT 12
COMPANY	DPC
WITNESS	Daniel J. Lewton (DJL-2)
DATE	08107+08/07

DOCKET NO. 070052-EI Deferred Tax Impact Exhibit \_\_\_\_\_(DJL-2) Page 1 of 1

## OPC'S QUANTIFICATION OF DEFERRED INCOME TAXES AND REVENUE REQUIREMENTS OF DEFERRED INCOME TAXES DUE TO CORRECTION OF DEPRECIATION TIMING THROUGH 2036

(Millions of Dollars)

Year	PEF Proposed Deferred Tax	Corrected Deferred Tax	PEF Proposed Revenue Reg.I	Corrected Revenue Rea.
Year 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020 2021 2022 2023 2024 2025 2026 2027 2028 2029 2030 2031 2032	Deferred Tax         (a)         \$0.00         \$0.00         \$2.39         -\$1.66         -\$0.04         -\$3.54         \$2.68         \$4.03         \$5.24         \$6.22         \$7.02         \$7.51         \$7.73         \$7.49         \$4.35         \$2.05         -\$9.44         -\$9.36         -\$4.98         -\$2.70         -\$2.70         -\$2.70         -\$2.70         -\$2.70         -\$1.35         \$0.00		$\begin{array}{c} \mbod{Revenue Req. I} \ (c) \ & \$0.00 \ & \$0.00 \ & \$0.32 \ & -\$0.22 \ & -\$0.21 \ & -\$0.47 \ & \$0.35 \ & \$0.53 \ & \$0.69 \ & \$0.82 \ & \$0.93 \ & \$0.99 \ & \$0.69 \ & \$0.82 \ & \$0.93 \ & \$0.99 \ & \$0.57 \ & \$0.27 \ & -\$1.24 \ & -\$1.24 \ & -\$1.24 \ & -\$1.24 \ & -\$1.24 \ & -\$1.24 \ & -\$0.96 \ & -\$0.66 \ & -\$0.36 \ & -\$0.36 \ & -\$0.36 \ & -\$0.36 \ & -\$0.36 \ & -\$0.36 \ & -\$0.36 \ & -\$0.00 \end{array}$	
2033 2034 2035 2036 Total	\$0.00 \$0.00 \$0.00 <u>\$0.00</u> \$0.00	\$6.83 \$6.83 \$6.83 <u>\$6.83</u> \$0.00	\$0.00 \$0.00 \$0.00 <u>\$0.00</u> \$0.00 \$0.00	\$0.90 \$0.90 \$0.90 <u>\$0.90</u> \$0.90
NPV Difference	\$9.68	-\$19.83 -\$29.50	\$1.28	-\$2.62 -\$3.89

## SOURCES AND REFERENCES

Column (a): PEF's response to OPC Interrogatory 12 spreadsheet line 95.Columns (b, d): OPC's corrected depreciation through 2036.Column (c): PEF's response to OPC Interrogatory 12 spreadsheet line 96.NPV: NPV based on 8.1% as proposed by PEF.

# FLORIDA PUBLIC SERVICE COMMISSION

DOCKET NO.070052-E1EXHIBIT 13 COMPANY OPC auton (DJL-3) Daniel WITNESS 07-DATE 0 408107

DOCKET NO. 070052-EI Net Savings At 7.5% ROR Exhibit \_\_\_\_(DJL-3) Page 1 of 1

## OPC'S QUANTIFICATION OF IMPACT ON NET SAVINGS DUE TO A REDUCED 7.5% OVERALL COST OF CAPITAL

(Millions of Dollars)

		PEF's Propose		<u>Based On 7.</u>	
	Fuel	Revenue	Net	Revenue	Net
<u>Year</u>	<u>Savings</u>	Requirements		<u>Requirements</u>	<u>Savings</u>
	(a)	(b)	(c)	(d)	(e)
2006	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
2007	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
2008	\$7.91	\$7.20	\$0.71	\$6.87	\$1.03
2009	\$6.31	\$1.47	\$4.84	\$1.15	\$5.16
2010	\$20.24	\$19.68	\$0.56	\$19.68	\$0.55
2011	\$25.87	\$31.60	-\$5.73	\$31.81	-\$5.94
2012	\$96.63	\$97.85	-\$1.22	\$75.21	\$21.42
2013	\$85.47	\$92.11	-\$6.64	\$71.90	\$13.57
2014	\$88.54	\$86.44	\$2.10	\$68.68	\$19.86
2015	\$84.26	\$80.82	\$3.44	\$65.51	\$18.75
2016	\$96.31	\$75.10	\$21.21	\$62.26	\$34.05
2017	\$93.78	\$69.43	\$24.35	\$59.07	\$34.70
2018	\$96.86	\$63.65	\$33.22	\$55.79	\$41.07
2019	\$98.99	\$57.21	\$41.78	\$51.86	\$47.13
2020	\$114.15	\$43.69	\$70.46	\$40.76	\$73.39
2021	\$104.87	\$33.29	\$71.58	\$32.34	\$72.53
2022	\$108.42	\$0.29	\$108.13	\$0.83	\$107.59
2023	\$102.26	\$0.30	\$101.96	\$0.84	\$101.43
2024	\$113.07	\$0.52	\$112.55	\$0.99	\$112.08
2025	\$114.07	\$0.79	\$113.28	\$1.20	\$112.86
2026	\$108.31	\$1.04	\$107.27	\$1.33	\$106.98
2027	\$108.92	\$1.39	\$107.53	\$1.55	\$107.37
2028	\$109.49	\$1.76	\$107.73	\$1.59	\$107.89
2029	\$110.02	\$1.48	\$108.54	\$1.64	\$108.38
2030	\$110.53	\$1.53	\$109.00	\$1.69	\$108.84
2031	\$111.01	\$1.76	\$109.25	\$1.83	\$109.18
2032	\$111.47	\$1.98	\$109.48	\$1.98	\$109.48
2033	\$111.90	\$2.03	\$109.87	\$2.03	\$109.87
2034	\$112.32	\$2.08	\$110.24	\$2.08	\$110.24
2035	\$112.72	\$2.13	\$110.59	\$2.13	\$110.59
2036	<u>\$113.10</u>	<u>\$2.18</u>	<u>\$110.92</u>	<u>\$2.18</u>	<u>\$110.92</u>
Total	\$2,677.80	\$780.79	\$1,897.00	\$666.78	\$2,011.02
Difference - No	ominal				-\$114.01
NPV Total	\$706.23	\$353.61	\$352.62	\$298.68	\$407.55
Difference -	NPV				-\$54.93

## SOURCE AND REFERENCES

Columns (a-c): PEF's response to OPC Interrogatory 12 spreadsheet.Column (d & e): PEF's response to OPC Interrogatory 12 spreadsheet<br/>modified to reflect a 7.5% rate of return.NPV: NPV based on 8.1% as proposed by PEF.

DOCKET NO. 070052-EI Cash Flow Comparison Exhibit \_\_\_\_(DJL-4) Page 1 of 1

# CUSTOMER/SHAREHOLDER CASH FLOW BENEFITS OF UPRATE PROPOSAL FOR THE PERIOD THROUGH 2016

Year	Revenue Requirement	Fuel Savin <u>gs</u>	Customer Net <u>Savings</u>	Cumulative <u>Net Savings</u>	Equity <u>Return</u>	Cumulative <u>Equity Return</u>
	(a)	(b)	(c)	(d)	(e)	(f)
2008	\$7.20	\$7.91	\$0.71	\$0.71	\$0.22	\$0.22
2009	\$1.47	\$6.31	\$4.84	\$5.55	\$0.49	\$0.72
2010	\$19.68	\$20.24	\$0.56	\$6.11	\$5.62	\$6.34
2011	\$31.60	\$25.87	-\$5.73	\$0.38	\$8.97	\$15.31
2012	\$97.85	\$96.63	-\$1.22	-\$0.84	\$26.88	\$42.19
2013	\$92.11	\$85.47	-\$6.64	-\$7.48	\$23.87	\$66.07
2014	\$86.44	\$88.54	\$2.10	-\$5.38	\$20.87	\$86.94
2015	\$80.82	\$84.26	\$3.44	-\$1.94	\$17.87	\$104.81
2016	\$75.10	\$96.31	\$21.21	\$19.27	\$14.87	\$119.68

# SOURCE AND REFERENCES

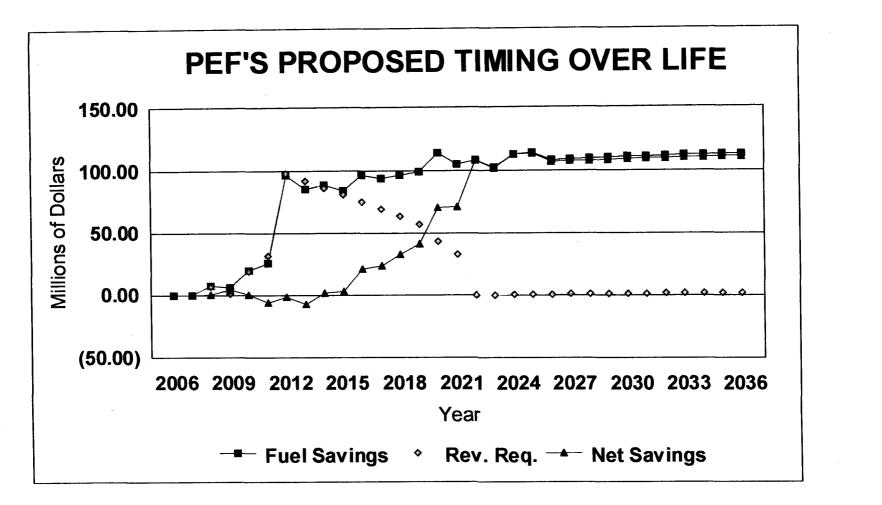
Columns (a-c)	: PEF's response to OPC Interrogatory 12 spreadsheet.
Column (d)	: Accumulation of Column (c).
Column (e)	: PEF's response to Interrogatory 8 in Docket No. 060642-EI.
	speadsheet "Debt-Equity Returns" cost of equity divided by
	grossed up return of 13.19% times average investment in
	PEF's response to OPC Interrogatory 12 spreadsheet in this case.
	OPC Interrogatory 12 spreadsheet in this case.
Column (f)	: Accumulation of Column (e).

DATE

FLORIDA	PUBLIC SERVICE COMMISSION
DOCKET N	0.070052-FEXHIBIT 14
COMPANY	OPC
WITNESS	Daniel J. Lawton (DJL-4)
DATE	ASTATION COLLEY

07

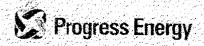
DOCKET NO. 070052-EI PEF'S Proposed Timing Exhibit \_\_\_\_\_ (DJL-5) Page 1 of 1



	UBLIC SERVICE COMMISSION	
DOCKET NO	<u>.070052-ETEXHIBIT5</u>	
COMPANY	OPC	
WITNESS	Daniel J. Lowton (DTL-1	5)
DATE	08 07 + 08 07	

Docket No. 070052-EI PEF Rate of Return Report Exhibit No. \_\_\_\_ (JP-1) Page 1 of 15

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February 14, 2007

Mr. John Slemkewicz, Public Utility Supervisor Electric and Gas Accounting Section Florida Public Service Commission 2540 Shumard Oak Boulevard Tallahassee, FL 32399-0850

Dear Mr. Slemkewicz:

Pursuant to Commission Rule 25-6.1352, enclosed please find Progress Energy Florida, Inc.'s Rate of Return report for the twelve months ended December 31, 2006.

The report includes the Company's actual rate of return computed on an end-of-period rate base, the Company's adjusted rate of return computed on an average rate base, the Company's end-of-period required rates of return, and certain financial integrity indicators for the twelve months ended December 31, 2006. The separation factors used for the jurisdictional amounts were developed from the cost of service prepared in compliance with the stipulation and settlement agreement approved in Docket No. 050078-EI, Order No. PSC-05-0945-S-FI.

This report also includes Schedule 6, the supplemental information associated with the Sebring rider as required by the FPSC in Docket No. 920949-FU, Order No. 92-1468-FOF-EL and as modified by Docket No. 930868-EL Order No. PSC-93-1519-FOF-EL

If you have any questions, please feel free to contact Cindy Lee at (727) 820-5535.

Sincerely,

via Puno

Will Garrett Controller, Progress Energy Florida

de Attachment xc: Mr. Harold McLean, Office of the Public Counsel

FLORID	A PUBLIC	SERVIC	E CON	<b>IMIS</b>	ION
	NO. 07005				
	Y FI	PUG			
WITNESS	Jeff	ry Po	llock	(2	<u>P-1</u> )
DATE	081	0/7 4	0810	7	and an early

# Docket No. 070052-EI PEF Rate of Return Report Exhibit No. \_\_\_ (JP-1) Page 2 of 15

	Actual Per Books	FPSC Adjustments	FPSC Adjusted	Pro Forma Adjustments	Pro Forma Adjusted
1. Average Rate of Return (Jurisdictional)		ويومو المحرر محمور معاقبة ومنافعة المتعارين المراجع		er forskatter fo	
Net Operating Income (a) (b)	\$412.261.767	(\$41,238,497)	\$371,023,251	\$0	\$371,023,261
Average Rale Base	\$4,587,753,19	(\$235 950 825)	\$4,351,802,294	\$0	\$4,351,802,294
Average Rate of Return	8.95%		8 53%		8.53%
1. Year End Rate of Return (Jurisdictional)		د و معدد و مراجع المراجع المراج المراجع و معادي و مراجع المراجع	ار و مع المراجع بالمراجع المراجع المراجع المعلم المراجع المراجع المراجع المراجع المراجع المراجع		
Net Operating Income	\$412,261,757	(541 235 497)	\$371,023,281	50	\$373,023,261
Year End Rate Base	\$4,752,105,923	(\$389.004,469)	\$4,373,102,534	\$0	\$4,373,102,524
Year End Rate of Return	8.66%		8.48%		8 48 %
Foolnotes		م می از این ا این از این از			
(a) Column (1) includes AFUDC earnings.			المحاصل المراجع والمراجع المحاصل والمحاصل المحاج المحاج المحاج المحاج المحاج المحاج المحاج المحاج المحاج المحا المحاج المحاج المحاج المحاج المحاج		
(b) Column (2) includes reversal of AFUDC earning	ngs.	ومراسطين فرمني فالمراسي والمنا			
		ا المعام الم المعام المواد المراجع العالم المراجع المعام المراجع المعام المراجع المعام المراجع المعام المراجع ا المعام المحاص المعام المعام المعام المحاص المعام			
	Average	End of Period	م می از این از این از این		
fil. Regulred Rates of Return FPSC Adjusted Basis	Capital Structure	Capilal Structure		المراجع	
Low Point	8.38%	8.42%			
Mid Point	8.98%	9.04%		يترجع مسروحية المتحر المرجع	
High Point	9.59%	0.664			
Pro Forma Adjusted Basis					
Low Point	8.38%				
Mid Point	8.98%	9.04%			
High Point	9 58%	9.65%			
IV. FINANCIAL INTEGRITY INDICATORS	<u> </u>				
A. T.I.E. WILL AFUDG	5.62.	(System Per Books Bas			
8. TIE without AFUDO	5.48	(System Per Books Bas			
C. AFUDC to Net Income	6.70%				
D. Internally Generated Funds E. STD/LTD to Total Investor Funds	116.07%	(Systein Per Books Bas	115)		
LT Deb-Fixed to Total Investor Funds					
CT Deb Fixed to Total Investor Funds	32.75%	(FPSC Adjusted Basis)			
P. Return on Common Equity	0 00% 11:00%	(FPSC Adjusted Basis)		مر المراجع الم المراجع المراجع	
a stretoti v tak over ti horr Equiry	11.00% 11.00%	(FPSC Adjusted Basis)		المراجع	
G: Current Allowed AFUDC Rate	8.85%	(Pro Forma Adjusted Ba Docket 050078 El Orde			
	\$~0 <b>.</b> \$%;	OUCKEL ODUCI & EL O(DE	1 F36-00-0945-S-El		
		م المراجع المراجع مع المراجع ا مدينة معمد المراجع المر		en e	
am aware that Section 807-06. Florida Statutes, provides			ا المصالحات المحاصلة مسالحات مستان المستحد مستعاد والمستحد المستحد المستحد المحاص المحاص المحاصة المحاصة المحاصة المحاصة المحاصة المحاصة المحاصة المحاصة المحاصة ا		
Wheever knowingly makes a false statement in writin		lead a public servant in			
the performance of his official duty shall be guilty of a	misdemeanor of the s	econd depres minishable			

Will Garrett, Control Progress Energy Florida

2-14-Date

## ROGRESS ENERGY FLORIDA verage Rate of Return - Rate Base scember 2006

Schedule 2 Page 1 of 3

stem Per Books	Plant in Service \$8,937,593,885	Accum Depr & Amort \$4.261,567,212	Net Plant In Service \$4,676,026,672	Future Use & Appd Unrecov Plant S9,046,653	Const Work in Progress \$517,484,715	Nuclear Fuel (Net) \$65,427,815	Net Utility Plant \$5,287,985,655	Working Capital \$21,355,957	Total Average Rate Base \$5,289,341,512
ARO	and a second				T. T				weitees/041/01/2
ECCR	10,906,932	(22, 104, 148)	33,011,080	0	0	0	33,011,080	(378,098,125)	(345 087 045)
ECRC	49,419	25,669	23,749	0	16,426	0.	40,175	(8,547,435)	and the second secon
and a second	3,005,530	149 554	2.855,975	0	11,130,036	6	13,986,013	8,258,825	(8,507,260)
FUEL	282,818,047	50,068,828	232,749,219	0	0	Ö	232,749,219	183,638,210	22,244,838
SCRC	0	0	0	Ű	······	0	202,140,213	134,285,504	416,387,429
Regulatory Base - System	\$8,640,813,956	\$4,233,427,309	\$4.407,386,647	\$9,046,653	\$506,338,252	\$65,427,615	\$4,988,199,167	\$81,818,979	134,285,504 \$5,070,018,146
Regulatory Base - Retail	\$7,921,788,092	\$3,924,782,247	\$3,997,005,845	\$6,851,795	\$414,935,490	\$63,032,671	\$4,521,825,800	\$65,927,319	\$4,587,753,119
SC Adjustments									44100211001110
:WIP - AFUDC	D.				(017 010 010)			المراويتية فراوية المحاجرة والعماد الم	
SAIN/LOSS ON SALE OF PLANT	n	0	بويترجد ببديد متودي موديستين والا	0	(237,359,872)	0	(237,359,872)	0	(237,359,872)
CAPITAL LEASE	(4,181,826)	0	0	0		0		(2,264,364)	(2,264,364)
IUC DECOM UNFUNDED WHOLESALE	(4,101,020)		(4,181,826)	0	0]	0	(4,181,826)	4,181,826	. (0)
ITO START UP COSTS	0	(2,286,276)	2,286.276	0	0	0	2,286,276	0	2,286,276
ECTION 1941 INC TAX ADJUSTMENT		0	0	0	0	0	.0	93,703	93,703
그는 학생 방법에서 이야지 않는 것은 것은 것을 하는 것을 하는 것을 가지 않는 것을 하는 것을 수 없다.	U	<u> </u>		0	0	0	0	1,293,432	1,293.432
Total FPSC Adjustments	(4,181,826)	(2,286,276)	(1,895,550)	0	(237,359.872)	0	(239,255,422)	3,304,597	(235,950,825)
FPSC Adjusted	\$7,917,606,266	\$3,922,495,971	\$3,995,110,295	\$6,851.795	\$217,575,618	\$63,032,671	\$4,282,570,378	\$69,231,915	\$4,351,802,294

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Docket No. 070052-EI PEF Rate of Return Report Exhibit No. \_\_\_\_\_(JP-1) Page 3 of 15

om Per Books' (a)	Operating Revenues	Fuel & Net Interchange	O&M Other	Depr & Amort	Taxes Other than Income	Incomé Taxes Current	Deforred Income Tax (Net)	Investment Tax Credit	Gain/Loss on Disposition	Total Operating	Ne: Operating
Recoverable:	\$4,560,623,120	\$2,530,408,291	\$675,343,794	\$403,781,163	\$309,074.331	\$237.704,365	(\$41,675,714)	(Net)	& Other	Expenses	Income
ARG	ار ایک						(941,0/3,/14)	(\$6,410.020)	SO	\$4.108,226,231	\$452,506.880
ECCR	0	0	0	(3 324)	0	0	(41,000)				
ECRC	60,879,845	0	61,159,893	9,884	15,632	639,294	And a second	0	0	(44,324)	44.324
FUEL	23,287,033	0	22,855,612	184,160	16,767	96,528	(757,165)	<u> </u>	0	61,067,537	(187,69)
SCRC	2.545,554,024	2,499,587,326	1. 0	9,006 81;	1,748,311	13.582,865		C	0	23,133,167	153,866
	122,445,779	0	0	the strength of the strength o	0	34,008		<u> </u>	0	2,523,925,314	21,528,710
			1	1		54,05/6	0 `	C	0	122 391.625	54,154
Regulatory Base - System	\$1,808,456,439	\$30,820,965	\$591,328,290	\$272,246,015	\$307 291 621	\$223351,570	(\$40,877,549)				
						4444441440	(340,017,549)	(\$6,410,000)	\$0	\$1,377,752,912	\$430,703,527
Regulatory Base - Retail	\$1,648,480,434	\$6,329,237	\$541,123,476	\$249,315.284	\$298,425,089	\$203,740,235					
					420,723,003	\$203,140,233	(\$37,576,812)	(\$5,892,838)	\$0	\$1,255,463,669	\$393,016,765
Adjustments											
RPORATE AIRCRAFT ALLOCATION	C	a	(668,934)	e.		·····		·			
ANCHISE FEE & GROSS REC TAX REVENUE	(200,515 907)	Ŭ	(600,934)	ويراجح ورواري ومنها والمعاد والمعار	0	258,041	0	0	0	(410,892)	410,892
WCHISE FEES & GROSS REC TAX TOI	0	C,	• •		0	(77,349,011)	0	0	0	(77,349.011)	(123,100,899
NLOSS ON SALE OF PLANT	0	U. 0	ليرتمده ليرجد وجنشر مشقوت برداده		(198.830,948)	76699,038	0	0	0	(122,131,910)	122,131,910
T/PROMOTIONAL ADVERTISING	0	and a standard and a standard and a standard	0	0	0	355,660	٥.	0	(921.995)	(566.335)	566,335
EREST ON TAX DEFICIENCY	0,	0			0	949,328	. 0	0	0	(1,511,685)	1.511,665
CELLANEOUS INTEREST EXPENSE	• • • • • • • • • • • • • • • • • • • •	. a	(329,843)	0	0	127,237	0.	0	0	(202,606)	202,606
AOVE ASSOC/ORGANIZATION DUES	0	0		0	0	(28,991)	Ċ,	0	0	46,164	(46, 164
AOVE DEFERRED TAX AFUDC DEBT	0	0,	(70,367)	0	0	27,144	0.	0	0	(43,223)	43,223
OVE ECONOMIC DEVELOPMENT	0	0	0	0	α	0	7.316	6	0.1	7,316	43,223
ENUE SHARING	0	0	(25,827)	0	0	9;963	0		. 0	(15,864)	
START UP COSTS	0	0	0	0	0	0	0	0	0	(13,304)	15,864 0
RING RIDER REVENUE	0	0	1,001	0	0.	(386)	0	0	0	615	المراجعة والمتحد والمتحد والمتح والمحاج والمحا
	(3,769,894)	0	0	0	Ó	(1454,237)	0	0	0	(1,454,237)	(615 (2.315,657
RING-TRANSITION DEPRECIATION	0	0	0	(3,371,989)	9	1300,745	0	0	0	where the manufacture of the second s	أصبقا والمشور فالمراجز الأستم مشتقا المشاوية
RM COSTS - 2004			0			0		alah sana sa ka 2010 ya		(2,071,244); 0	2.071.244
REST SYNCHRONIZATION - FPSC	C .	5	O,	0	0	23410.597	6	0	0	23,410,597	(23,410,597
Total FPSC Adjustmonts	(204,285,801)	Q	(3,479,810)	(3,371,989)	(198,830,948);	24305,129	7,116	0	(921,995)	(182,292,297)	(23,410,597)
									{321,333]	(102,232,237)	[21,995,504]
FPSC Adjusted	\$1,444,194,633	\$6,329,237	\$537,643,686	\$245,943,295	\$99,594,141	\$228 045,364	(\$37.569 496)	(\$5,892,838)	(\$921,995)	\$1,073,171,373	\$371,023,261
<b>53</b>				taraationa yaaladaa ya					(441,253)	-1,013,111,313	2
(a); The addition of earnings from AFUDC charg	es would increase th	ne system NOI by	\$21,891,699								Ū
일을 가장한 것 같은 것은 것은 것을 가지 않는 것이 있는 것이 있다. 같은 것을 같은 것은 것은 것은 것은 것은 것은 것이 같은 것이 없는 것이 같이 있다.		isdictional NOI by	\$19,244,992								
nt Month											
사망 관계 전 거리에는 것 같아? 동네는 것을		وأبيها فالمحاصر وروار المحاط	an a balance a subsection of the second s		Taxes	Income	Deferred			المجارية فسنجر ببسيد مست	
	Operating	Fuel & Net	08M	Depr &	Other than	Taxes	Deferred	nvestment Tax Credit	Gain/Loss on	Total	Net C
	Revenues.	Interchange	Other	Amort	Income	Current	(Net)	(Net)	Disposition . & Other	Operating	Operating Income
Par Books								lined		Expenses	Incoste
Excluding AFUDC Earnings and Recoverable	\$135,478,356	\$2,872,723	\$52,309,390	\$25,109,767	\$19,635,082	\$17 071,516	(\$3,449,194)	(\$965,000)	\$0	6440 COL 105	100 404 444
tional Per Books					+13,033,002	+11 01 1 0 10	[20'ac2'13.4];	(3423,000)		\$112,584,285	\$22,894,070
Excluding AFUDC Earnings and Recoverable	\$130,846,993	\$570.029	\$48,129,253	\$22,395,536	\$19,210,959	*****					
				010,000,144	. 315.210.905 l	\$18 611,562	(\$3,170,682)	(\$867,143)	\$0	\$104,859,515	\$25,987,478

OGRESS ENERGY FLORIDA erage Rate of Return - Income Statement cember 2006

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Schedule 2 Page 2 of 3

# OGRESS ENERGY FLORIDA erage Rate of Return - Adjustments cember 2006

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otes	Rate Base Adjustments	P=Pro Forma F=FPSC	System	Rotali
(1)	CWIP - AFUDC	F	(\$269,944,276)	and a support of the second seco
(1)	GAIN/LOSS ON SALE OF PLANT	; F	(2,152,235)	(2.284.364)
(2)	CAPITAL LEASE-EPS	F	(4,181,826)	(4,181,826)
2)	CAPITAL LEASE-WORKING CAPITAL	F	4.181.826	4,181,826
1)	NUC. DECOM. UNFUNDED - WHOLESALE	F	2,286,276	2,286,276
2)	RTO START UP COSTS	F	100.452	93,703
1)	SECTION 1341 INC TAX ADJUSTMENT	F	1,407,470	1,293,432
	Total		(\$268,302,313)	The second

			Syste	m	Retai	
otes	Income Statement Adjustments (to NOI)	P=Pro Forma F=FPSC	Amount	Income Tax Effect	Amount	Income Tax Effect
(2)	CORPORATE AIRCRAFT ALLOCATION	F	(\$743,438)	\$286.781	(\$668,934)	\$258.041
(1)	FRANCHISE FEE. & GROSS REC TAX REVENUE	F	200,515,907	(77,349.011)	200,515,907	(77,349,011)
(1)	FRANCHISE FEES & GROSS REC TAX - TOI	F	(198,830,948)	76,699.038	(198,830,948)	76,699,038
(1)	GAIN/LOSS ON SALE OF PLANT	F	(1,043,318)	402,460	(921,995)	355,660
(1)	INST /PROMOTIONAL ADVERTISING	F	(2,700,663)	1.041,781	(2,460,994)	949,328
1)	INTEREST ON TAX DEFICIENCY	F .	(361,966)	139,626	(329,843)	127,237
1)	MISCELLANEOUS INTEREST EXPENSE	F	572,046	(220.667)	75.155	(28,991)
i)	REMOVE ASSOC/ORGANIZATION DUES	F	(77,220)	29,758	(70,367)	27,144
1)	REMOVE DEFERRED TAX AFUDG DEBT	F	0	8.000	0	7,316
1)	REMOVE ECONOMIC DEVELOPMENT	F	(28,342)	10,933	(25,827)	9,963
2)	REVENUE SHARING	F	0	0	0	0
21	RTO START UP COSTS	F	1,404	(542)	1.001	(386)
1)	SEBRING - RIDER REVENUE	F	3,769,894	(1,454,237)	3,769,894	(1,454,237)
1)	SEBRING - TRANSITION DEPRECIATION	F	(3,371,989)	1,300,745	(3,371,989)	1,300,745
	STORM COSTS 2004	F	0	0	Ö .	0
1)	INTEREST SYNCHRONIZATION - FPSC	F	0	25,830,915	0	23,410,597
	Tota		(\$2,298,633)	\$26,725,613	(\$2,318,940)	\$24,312,445.

Schedule 2

Page 3 of 3

Page 5 of 15 xhibit No Rate o

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eport

(1) Docket No. 910890-EI, Order No. PSC 92-0208-FOF-EI (2) N/A

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OGRESS ENERGY FLORIDA d of Period Rate of Return - Rate Base cember 2006 

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Schedule 3 Page 1 of 3

tem Per Books	Plant in Service	Accum Depr & Amort	Net Plant In Service	Future Use & Appd Unrecov Plant	Const Work In Progress	Nuclear Fuel (Net)	Net Utility	Working	Total Period End
s Recoverable:	\$9,225,480,896	\$4,339,981,105	\$4,885,499,791	\$7,422,007	\$641 485 881	and a second sec	Plant	Capital	Rate Base
the second s					4041 403 861	\$58,409,362	\$5,592,817,041	\$21,355,967	\$5,614,172,998
ARO	10,906,932	(22,068,037)	32,994,969	0	ويتقيدون والمنافرة والمنافر المنافر والمراجع		والمحاجبة والمستحد والمحاج	الم	
ECCR	49,419	27,001	22,418	0	V	<u> </u>	32,994,969	(378,098,125)	(345,103,156
ECRC	3,698,169	143,598	3,554,571		112 155	0	134,573	(8,547,435)	(8,412,863)
FUEL	286,837,855	57,616,067	229,221,788	0.	30,248,528	0.	33,803,098	8,258,825	42,061,923
SCRC	0	0	0	0	0	0	229,221,788	. 183,638,210	412,859,998
				<u> </u>	0	. 0	Q	134 285 504	134,285,504
Regulatory Base - System	\$8,923,988,523	\$4,304,282,476	\$4;619,708,046	\$7,422,007	\$611,125,198	\$58,409,362	\$5,296,662,613	\$81,818,979	\$5,378,481,592
Regulatory Base - Retail	\$8,115,847,278	\$4,041,610,316	\$4,074,236,962	\$5,621,313	\$560,042,428	\$56,278,971	\$4,696,179,674		
∧ ∧						400,210,011	J4,030,175,074	\$65,927,319	\$4,762,106,993
C Adjustments									
WIP AFUDC	Ô	0	0	0	(320,413,515)	0	1000 440 545		
AIN/LOSS ON SALE OF PLANT	0	0;	D	O C	0	ويتحقق والمستحد والمستحد والمستحد المستح	(390.413,515)	وسيليس والمراجعة والمحمور والمعاص والمراجع	(390,413,515)
APITAL LEASE	(54.363,739)	0	(54,363,739)		محافظه فيعاصب فيصفحك بوحادك عادر تهدرت ودعريك	0	0.	(2,264,364)	(2,264,364)
JC DECOM UNFUNDED - WHOLESALE	0	(2,266,276)	2,285,276		0	0	(54,363,739)	54,363,739	(0)
O START UP COSTS	.0	Ċ		a se		0	2,286,276	0	2;286;276
CTION 1341 INC TAX ADJUSTMENT	0	0		0	0	0		93,703	93.703
Total FPSC Adjustments	(54,363,739)	(2,286,276)	(52,077,463)	<u> </u>	0	<u> </u>	0	1,293,432	1,293,432
		1-71-0/1	132,011,463]	0	(350,413,515)	0	(442,490,978)	53,486,509	(389,004,469)
FPSC Adjusted	\$8,061,483,539	\$4,039,324,040	\$4,022,159,499	<b>AN AN A A A</b>					
and the second			47,VAL, 133,455	\$5,621,313	\$169,628,913	\$56,278,971	\$4,253,688,696	\$119,413,828	\$4,373,102,524

Pag ket No. 070052-Rate of Retu Ó, 0 ō 5 ш Report

**DGRESS ENERGY FLORIDA** t of Period - Income Statement :ember 2006

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> 070052-E Return (JP-1)

Report

	Operating Revenues	Fuel & Net Interchange	O&M Other	Depr & Amort	Taxes Other than Income	lncome Tares Curront	Deferred Income Tax	Investment Tax Credit	Gain/Loss on Disposition	Total Operating	Net Operating
om Per Books (a)	\$4,560,623,120	\$2,530,408,291	\$675,343,794	\$403,781,163	the second s	\$237,704,366	(Net)	(Net)	& Other	Expenses	Iricome
Recoverable:						\$2.37,104,305	(\$41,675,714)	(\$6,410,000)	\$0	\$4,108,226,231	\$452,396,889
ARO	0	0	0.	(3,324)	0	0					
ECCR	60,879,845	0	61,159,893	9,884	15,632		(41,000)	a man search in the second and in some single	0	(44,324)	44,324
ECRC	23,287,033	σ	22,855,612	164,160	16 767	(39,294	(757,165)	0	0	61,067,537	(187,692)
FUEL	2,545,554,024	2,499,587,328	5	9,005,811	1,748,311	96,628	Ų.	0	¢	23,133,167	153,866
SCRC	122,445,779	0	0	122,357,617.	1,740,511	13,582,865 34,008	0	0	0	2.523,925,314:	21,628,710
						34,008	0	0	0	122.391,625	54,154
Regulatory Base- System	\$1,808,456,439	\$30,820,965	\$591,328,290	\$272,246,015	\$307,293,621	\$223,351,570	(\$40,877,549)	(\$6,410,000)	<b>S</b> 0	\$1.377.752.912	\$430,703,527
Regulatory Base Retail	\$1,648,480,434	\$6,329,237	\$541,123,476	\$249,315,284	\$298.425,059	\$203,740,235	(\$37,576,812)	(\$5,892,838)	<b>S</b> 0	\$1,255,463,669	\$393,016,765
Adjustments											*****
RPORATE AIRGRAFT ALLOCATION	وراجيه والمتحد مسترونة والجنبة			A Contraction of the second							
ANCHISE FEE & GROSS REC TAX REVENUE	0 (	0	. (668.934)	Ċ	0	258,041	, Q	Q	0	(410,892)	410,892
ANCHISE FEES & GROSS REC TAX REVENUE	(200,615 907)	0	inter i coli cole esemente con co	0	0	(77 349.011)	0	0	0	(77,349,011)	(123, 166, 896)
INLOSS ON SALE OF PLANT	0.	¢		3	(198,830,948)	76,699,038	0	0	0	(122,131.910)	122,131,910
ST./PROMOTIONAL ADVERTISING	0.	. المرجوع مستعمل المشاعر مستقله	and an an a standard and a stand	6	Ò	\$55,660	0	0	(921,995)	(566,335)	566,335
EREST ON TAX DEFICIENCY	0		(2.460,994)	0	0	949,328	0	0.1	0	(1,511,665)	1,511,665
SCELLANEOLIS INTEREST EXPENSE	0	0	(329,843)	0	0.	127.237	0	0	Ó	(202,606)	202,606
MOVE ASSOC/ORGANIZATION DUES	•	0	.75,155	0	0.	(28,991)	0	0	0	46,164	(46,164)
MOVE DEFERRED TAX AFUDC DEBT		0		<u> </u>	ů .	27,144	0	0	С,	. (43,223)	43,223
MOVE ECONOMIC DEVELOPMENT	0	Ó	ويربعه فيحد فأرد فعاقه فأ	0	0	0	7,316	0	0	7:316	(7,315)
VENUE SHARING		0			0	9,963	0	0		(15.864)	15,864
O STARTUP COSTS	0	- 0	0	0	0;	0 :	0	0.	Û	0`,	Q
BRING - RIDER REVENUE	Q	0		0.	0	(386)	0	0	0	615	(615)
second ready where the weighted states are determined as a second with the second ready of the determined	(3.769.894)	Ö	<b>.</b>		سيئهدنكم بالحبا محويي بالرز	(1 454 237)	0	0	0,	(1,454,237)	(2,315,657)
BRING TRANSITION DEPRECIATION	<b>, C</b>	0	0	(3;371.989)	0	1 300 745	0	¢	0	(2,071,244)	2,071,244
ORM COSTS - 2004			0		مستمد ويدسر وروار ورشم	0				0	0
EREST SYNCHRONIZATION - FPSC	0.	0		0	0	23,410,597	0	0	0	23,410,597	(23.410.557)
Total FPSC Adjustments	(204,285,801)	0	(3.479,810)	(3,371,989)	(198,830,948)	24,305,129	7,316	0	(921,995)	(182,292,297)	(21,993,504)
FPSC Adjusted	\$1,444,194,633	\$6,329,237	\$537,643,666	\$745 943 295	\$99.594.441	SZ28.045.364	(\$37,569,496)	(\$5,892,838)	(\$921,995)	\$1,073,171,373	\$371,023,26

ROGRESS ENERGY FLORIDA nd of Period Rate of Return - Adjustments ecember 2006

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Report

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Notes	Rate Base Adjustments	P=Pro Forma		
(1)	CWIP - AFUDC	F=FPSC	System	Retail
(1)	GAINLOSS ON SALE OF PLANT	E F	(\$448,161,874)	(\$390,413,515)
(2)	CAPITALLEASE	F	(2,152,235)	
	CAPITALLEASE	E	(54,363,739)	(54,363,739)
en la service de la servic	NUC. DECOM UNFUNDED - WHOLESALE	F	54,363,739	54,363,739
(2)	RTO START UP COSTS		2,286,276	2,286,276
	SECTION 1341 INC TAX ADJUSTMENT	F	100,452	93,703
	OCOTION 1341 INC TAX ADJUSTMENT	Ĕ	1,407,470	1,293,432
	Total		(\$446.519,912)	(\$389,004,469)

	상태를 가슴다고 있는 것이 같아 같아요. 것이 가 같아요. 가지 않는 것이 가지? 같아? 이 같이 것은 것은 것이 가 같아요. 것이 것이 같아요. 가지?		Syster	Π	Retai	
lotes (2)	Income Statement Adjustments (to NOI) CORPORATE AIRCRAFT ALLOCATION	P=Pro Forma. F=FPSC	Amount	Income Tax Effect	Amount	Income Tax Effect
(1).	FRANCHISE FEE & GROSS REC TAX REVENUE	F F	(\$743,438) 200,515,907	\$286,761	(\$668.934)	\$258,041
(1) (1)	FRANCHISE FEES & GROSS REC TAX - TOI	F	(198,830,948)	(77,349,011) 76,699,038	200,515,907 (198,830,948)	(77,349,011) 76,699,038
(1)	INST /PROMOTIONAL ADVERTISING	F F	(1.043.318) (2,700,663)	402,460	(921,995)	355,660
( <u>1)</u> ( <u>1</u> )	INTEREST ON TAX DEFICIENCY MISCELLANEOUS INTEREST EXPENSE	F	(361,966)	139,628	(2,460,994) (329,843)	949,328 127,237
(1)	REMOVE ASSOCIORGANIZATION DUES	F.	572,046 (77,220)	(220,667) 29,788	75,155	(28,991
( <u>1)</u> (1)	REMOVE DEFERRED TAX AFUDC DEBT REMOVE ECONOMIC DEVELOPMENT	F	0	8,000	(70,367) 0	27,144 7,316
(2)	REVENUE SHARING	F I I	(28,342)	10.933	(25,827)	9.963
(2). (1)	RTO START UP COSTS SEBRING - RIDER REVENUE	F	1,404	(542)	1, <b>D01</b>	0 (386)
(1)	SEBRING - TRANSITION DEPRECIATION	F	3,769,894 (3,371,989)	(1,454,237)	3.769.894 (3,371,989)	(1,454,237) 1,300,745
1)	STORM COSTS 2004	F. S.	0	0	0	•
	Total	<u> </u>	(\$2,298,633)	25,830,915 \$26,725,613	0 (\$2,318,940)	23,410,597 \$24,312,445

(1) Docket No. 910890-EI, Orde: No. PSC 92:0203 FOF-EI (2) N/A

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ROGRESS ENERGY FLORIDA verage Rate of Return - Capital Structure 'ro Forma Adjusted Basis Jecember 2006

System Per

Books

Pro Rata Specif Adjustments Adjustm	the second s	Ratio	Low I Cost Rate	Weighted	Cost	Point Weighted	Gost	h Point Weighted
(\$553,271,829) \$1,040,8		60.35% ***	المريشين المتشار لمحمر الكام الأ	Cost 6,49%	Rate	Cost 7.09%	Rate 12.75%	Cost 7 69%
(7,242,830) (547,674,194) (220,84	0 19,963,104 (6,764) 1,288 684 378	والمعاصر بسيارة مليج المعاد الأناج الإد	4.51% 5.74%	0.02% 1.70%				0.02%
60.3:	15,690 1	0.00%	0.00%	0.00%	5.74% 0.00%		5.74% 0.00%	1.70% 0.00%

ommon Equity	\$2,633,063,251	CD 400 COT 460	- Walting (115	Aujustinents	Retail	Ratio	Rate	Cost	Rate	Cost	Rate	Cost
referred Stock		\$2.138.567.182	and a second in the second provided and	\$1,040,820,380	\$2,626,115,733	60.35% ***	10.75%	6.49%	11.75%	7 09%		and a second second
ing Term Debt - Fixed	33,496,700	27,205,933	(7,242,830)	0	19,963,104	0.46%	4,51%	0.92%	internet of the second s	the second s	12.75%	7 69%
	2 532,888,290	2.057,205,337	(547,674,194)	(220,846,764)	1,288 684 378	29.61%	5.74%	1.70%			4.51%	0.02%
1ort Term Debt	(74,286,975)	(60.335,690)		60.335,690	the second se	0.00%	an ann an an ann an ann an an an an an a	and the second states of the	5.74%	1.70%	5.74%	1.70%
islomer Deposits					والمراجع ويستجر المريح سروية المعدانة المعاد	0.00 %	0.00%	0.00%	0.00%.	0.00%	0.00%	0 00%.
Active	150,338,406	122,104,466	(32,506,947)	A	00 E07 Cath					· · · · · · · · · · · · · · · · · · ·		
Inactive	686,568	557,629	(148,453)	0.	89,597,519	2.06%	6.21%	0.13%	6.21%	0.13%	6.21%	0.13%
vestment Tax Credit	and and a second se		(140,400)		409,176	0.01%		مربعة من				
Post '70 Total	26 895 584	21.844.524	C BAT COOL		وتهاف ومروسيتهم وسا والمعاد شعافه							
Equity **		21,044,324	(5,815,502)									
Debt **	والمحصور والمترفع والمعصور والمحادث				10,779,316	0.25%	10.70%	0.03%	11.69%	0.03%	12.68%	0.03%
a serie and a serie and a series of the seri	ار میں اور اور اور اور اور اور استعماد کا			and any management of the second second	5 249,706	0.12%	5.74%	0.01%	5.74%	0.01%	5.74%	0.01%
ferred income Taxes	405 707 668	330,326,919	(87.940.434)	107,478,530	349,865,015	8.04%	ter entra a transmission d		and the second	and a construction of the second s	", ši	
S 109 DIT Net	(61 220.561)	(49,723,182)	13,237,425	(2,375.898)	(38.861.654)	0.89%		لا الماريخ من المانية. في الماريخ من المانية				
								a a se a				
Total	\$5,648,568,933	\$4,587,753,119	(\$1,221,362,763)	\$985,411,938	\$4,351,802,294	100.00%		8.38%		8.98%		9,58%

aily Weighted Average

Cost Rates Calculated Per IRS Ruling

Equity Ratio Including Debt Associated With Qualifying Facilities Contracts (Based on FPSC Capital Structure) Docket No. 050078-EI, Order No. 05-0945-S-EI, Paragraph No. 13

Retail Per

Books

53.97%

Schedule 4

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ROGRESS ENERGY FLORIDA nd of Period - Capital Structure ro Forma Adjusted Basis ecember 2006

I

Merred Stock         33,496,700         27,634,762         (7,412,851)         0.         20,221,911         0.46%         4.51%         0.02%         1.72%         5.79%         1.72%         5.79%         1.72%         5.79%         1.72%         5.79%         1.72%         5.79%         0.00%         0.00%         0.00%         0.00%         0.00%         0.00%         0.00%         0.00%         0.00%         0.00%         <				에 집은 것 같은 것 같아요.	우리는 것 같아?			Low	Point	Mid	Point	Hig	h Point
Merred Stock       33,496,700       27,634,762       (7,412,851)       0.       20,221,911       0.46%       4.51%       0.02%       1.72%       5.79%       1.72%       5.79%       1.72%       5.79%       1.72%       5.79%       0.00%       0.00%       0.00%       0.00%       0.00%       0.00%       0.00%       0.00%       0.00%       0.00%       0.00%       0.00%       0.01%       0.14%       0.14%       0.14%       0.14%       0.14%		승규는 이 것 같은 것이 가지 않는 것이 없다.					Ratio						
Ing Term Debt - Fixed ort Term Debt ' stomer Deposits       2,509,766,089       2,070,567,425       (555,416,674)       (214,015,134)       1,301,135,618       29.75%       5.79%       1.72%       5.79%       0.00%       0.01%       0.14%       0.14%       0.14%       0.14%       0.14%       0.14%       0.14%       0.14%       0.14%	mmon Equily	\$2,682,292,656	\$2,212,890,214	(\$603,970,786)	\$1,040,820,380	\$2,649,739,806	60.59% ***	10.75%	6.51%	11.75%	7.12%	12.75%	7.73%
ort Term Debt         46,890,541         38,684,675         (38,684,675)         (0)         0.00% <th< td=""><td>Herred Slock</td><td>33,496,700</td><td>27,634,762</td><td>(7,412,851)</td><td>0.1</td><td>20,221,911</td><td>0.46%</td><td>4.51%</td><td>0.02%</td><td>4.51%</td><td>0.02%</td><td>4.51%</td><td>0.02%</td></th<>	Herred Slock	33,496,700	27,634,762	(7,412,851)	0.1	20,221,911	0.46%	4.51%	0.02%	4.51%	0.02%	4.51%	0.02%
stome Deposits         Count (c)         Count (c) <thcount (c)<="" th=""></thcount>	ng Term Debt - Fixed	2,509,780,089	2,070,567,425	(555,416,674)	(214,015,134)	1,301,135,618	29.75%	5.79%	1.72%	5.79%	1:72%	5.79%	1.72%
Active         159.270,769         131.396.311         (35.246.770)         0         96,151.542         2.20%         6.21%         0.14%         0	ort Term Debt	46,890,541	38,684,675		(38,684,675)	(0)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Inactive         779,017         642,660         (172,397)         0         470,291         0,01%         0         0         100,01%         0 <td>stomer Deposits</td> <td></td>	stomer Deposits												
estmont Tax Credit         0.0121         0.014           Post 70 Total         23,386,508         19,293,856         (5,175,456)         9.492,486         0.22%         10.70%         0.02%         11.69%         0.03%         12.66%         0.03%           Equity **         9.492,486         0.22%         10.70%         0.02%         11.69%         0.03%         12.66%         0.03%           Debt **         4,625,914         0.11%         5.79%         0.01%         5.79%         0.01%           ferred Income Taxes         380,395,307         313,825,954         (84,181,836)         102,392,661         332,036,779         7.59%         0.01%         5.79%         0.01%	Active	159,270,769	131,398,311	(35,245,770)	0 !	96,151,542	2.20%	6 21%	0.14%	6.21%	0.14%	6.21%	0.14%
Post 70 Total         23,386,508         19,293,856         (5,175,456)         9,492,486         0.22%         10,70%         0.02%         11,69%         0.03%         12,68%         0.03%           Eguity **         9,492,486         0,22%         10,70%         0.02%         11,69%         0.03%         12,68%         0.03%           Debt **         4,825,914         0,11%         5,79%         0.01%         5,79%         0.01%           forred income Taxes         380,395,307         313,825,954         (84,181,836)         102,392,661         332,036,779         7,59%         0.01%         5,79%         0.01%	Inactive	779,017	642,668	(172,397)	0	470.291	0.01%		a dan gunda salah sara da sara s				
Eguity         9.492.488         0.22%         10.70%         0.02%         11.69%         0.03%         12.66%         0.03%           Debt         4.625.914         0.11%         5.79%         0.01%         5.79%	estment Tax Credit												
Debt **         4,625.914         0.11%         5.79%         0.01%         5.79%	Post 70 Total	23,386,508	19,293,858	(5,175,456)									
ferred Income Taxes 380,395,307 313,825,954 (84,181,836) 102,392,661 332,036,779 7.59%	Equity **					9.492,488	0.22%	10.70%	0.02%	11.69%	0.03%	12.68%	0.03%
we want in the second	Debt **					4,825,914	0.11%	5,79%	0.01%	5.79%	0.01%	5.79%	0.01%
S 109 DIT - Net (64,037,484) (52,830,895) 14,171,555 (2,112,487) (40,771,827) -0.93%	ferred Income Taxes	380,395,307	313,825,954	(84,181.836)	102,392,661	332,036,779	7.59%						
	S 109 DIT - Net	(64,037,484)	(52,830,895)	14,171,555	(2,112,487)	(40,771,827)	-0.93%						

\$4,373,102,524

\$888,400,745

#### ally Weighted Average

ost Rates Calculated Per IRS Ruling

Total \$5,772,254,101

Equity Ratio Including Debt Associated With Qualifying Facilities Contracts (Based on FPSC Capital Structure). Dockel No. 050078-EI, Order No. 05-0945-S-EI, Paragraph No. 13

\$4,762,106,993 (\$1,277,405,214)

54.05%

100.00%

Schedule 4 Page 2 of 4

9.65%

Page 10 of 15 xhibit No.

ket No. ۲۰۰۶ F Rate of Return Re ارم (JP-1)

. 070052-El Taturn Report

9.04%

8:42%

## Docket No. 070052-EI PEF Rate of Return Report Exhibit No. \_\_\_\_ (JP-1) Page 11 of 15

\$19,963.104

\$7

Schedule 5

### PROGRESS ENERGY FLORIDA Financial Integrity Indicators

December 2006

#### A: TIMES INTEREST EARNED WITH AFUDC

Earnings Befor	e interes	1	1.2.2	 \$676,235,960
AFUDC - Debt				\$5,058,905
income Taxes				\$193,440,642
Total			 	\$874,734,506
Interest Charge (before deduct)	ng AFUC			\$155 524,490
T.I.E. Wit	AFUDC			5.82

#### B: TIMES INTEREST EARNED WITHOUT AFUDC

Earnings Before Interest		\$576.236.960
AFUDC - Equity		 (\$16,834,794)
Income Taxes		\$193.440.642
Total		\$852,842,808
Interest Charges		
(before deducting AFUDC-		\$155,524,490
T.I.E. without AFUD	σ	5.48

## C: PERCENT AFUDC TO NET INCOME AVAILABLE

FOR COMMON SHAREHOLDERS	
AFUDC - Dabt \$5.0	5.905
Less: DIT	8,000)
Subtotal \$5,0	4,905
AFLIDC - Other 315,81	4,794
Total AFUDC \$21,89	9,699
Nel Income Available	
For Common Shareholders \$326.72	4.531
	6:70%

#### D: PERCENT INTERNALLY GENERATED FUNDS

PERCENTINTERNALLI GENERATED FUNDS	and the second secon
Net income	\$328,236,391
Common Dividends	(\$234,850,392)
Preferred Dividends	(\$1,511,860)
AFUDC (Debt & EGS Other)	(\$21,891,699)
Depreciation & Amonization	\$409,873.856
Deterred income Taxes	(\$42,363.927)
Investment Tax Credis	(\$6,410,000)
Deferred Fuel (Net)	\$403,584,738
Nuclear Fuel Amonization	\$23,468,052
Nuclear Refueling	\$13,506,021
Other - Incl Nuclear Decommissioning	(\$14,968,992)
Funds Provided from Operations	\$856;871,988
Other Funds Provides	
Ind Change in Working Capital	(\$4,357,207)
Total Funds Provided	\$852,514,781
Construction Experiditures (excluding AFUDC)	5734,481,800
Percentage Internally Generated Funds	116.07%

#### Common Equily \$2,826,115,733 Preferred Stock Long Term Debt - Fixed Rale \$1,288,684,378 Short Term Debt Total \$3.934.763.215

PERCENT OF TOTAL INVESTOR CAPITAL - FPSC

SHORT TERM DEBT / LONG TERM DEBT AS

Έ.

موجع معرية بأن محترية من محترية ومن مسعود ويديع مديني من من من من من				
% Long Ten	n Debt -	Fixed Rate		32.75%
% Short Ten	n Debt			0.00%

#### FPSC ADJUSTED AVERAGE

#### JURISDICTIONAL AND PRO FORMA F: RETURN ON COMMON EQUITY Pro Forma FPSC Average Earned Rate of Return 8.53% 8.53% Less Reconciled Average Retail Weighted Cost Rates for: Preferred Stock 0.02% 0 02% Long Term Debt - Fixed Rate 1.70% 1.70% Short Term Debt. 0.00% 0.00% Customer Deposits 0.13% 0 13% Investment Tax Credit (at Midpont) Equity 0'03% 0.03% Debt 0.01% 0.01% Subtotal 1.89% 1.89% Total 6.64% 6.64% Divided by Common Equity Ratio 60.35% 50.35%

1		
đ	Jurisdictional Return on Common Equity 11.00% 11.00%	
ï		÷.,

PROGRESS ENERGY FLORIDA End of Period - Capital Structure PSC Adjusted Basis December 2006

Schedulo 4 Page 4 of 4

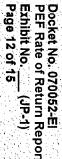
	System Per	Retail Per	Pro Rata	Sheelfle	TDOG .		Low	Point	Mid	Point	Hig	h Point
	Books	Books	Adjustments	Specific Adjustments	FPSC Adjusted	Ratio	Cost Rate	Weighted	Cost	Weighted	Cost	Weighted
ornmon Equity	\$2,682,292,656	\$2,212,890,214	(\$603,970,786)	\$1,040,820,380	\$2,649,739,808	إربار وخاليعم وبرائة حسامة مراجع والإحافة	-	Cost	Rate	Cost	Rate	Cost
referred Stock	33,496,700	27,634,762	(7,412,851)	¢7,0.0,020,000	the second se	60.59% ***	10.75%	6.51%	11.75%	7.12%	12.75%	7.73%
ong Term Debt - Fixed	2.509,780.089	2.070,567,425	، و	U.,	20,221,911	0.46%	4 51%	0.02%	4.51%	0.02%	4.51%	0.02%
hort Term Debt	46,890,541	يهيئون والمرتبة والمستجرة والمستجرة فيتحرب والرجاف	(555,416,674)	(214,015,134)	and a second and a second and a second as a second	29.75%	5 79%	1 72%	5 79%	1.72%	5.79%	1.72%
ustomer Deposits	40,030,341	38,684,675		(38,684,675)	(0)	0.00%	0.00%	0.00%	0.00%	0,00%	0.00%	0.00%
Active	159,270,769	131,398,311	(35.246,770)		والمناسب والمتحوي المحم المحمد والم	و و د و مور و موه شاهسته اس		an a	میں میں میں میں اور	و بر الم الم		
Inactive	779,017	642,688	(172,397)	0	96.151.542	2.20%	6.21%	0.14%	6.21%	0.14%	6.21%	0.14%
vestment Tax Credit					470,291	0.01%						
Post 70 Total	23,386,508	19 293,858	(5,175,456)									در از در در میشود. در از در در میشود.
Equity **					O'ADD ADD	n onde	10.700			والمتعارفة والمعادية		and the second
Debt **	n de ser de selecter de la construction de la construction de la construction de la construction de la constru En la construction de la construction				9,492,488	0.22%	10.70%		11.69%	يها مذوقهم بالمحرمة ماتر الأراد	12.68%	0.03%
eferred Income Taxes	380.395,307	313.825.954	10 4 4 6 4 9 A 4 1		4,625,914	0.11%	5.79%	0.01%	5.79%	0.01%	5.79%	0.01%
- an an in specific in the second state of the	والمرتبسيس ويترجب ومتحوص ومنصف والمراك		(84.181,836)	102,392,661	332,036,779	7.59%						
AS 109 DIT - Net	(64,037,484)	(52.830,895)	14,171,555	(2,112,487)	(40;771,827)	-0.93%						
Tota	\$5,772,254,101	\$4,762,105,993	(\$1;277,405,214)	\$888,400,745	\$4,373,102,524	100.00%		8.42%		9.04%		9.65%

Daily Weighted Average

Cost Rates Calculated Per IRS Ruling

Equily Ratio Including Debt Associated With Qualifying Facilities Contracts (Based on FPSC Capital Structure) Docket No. 050078-EI, Order No. 05-0945-S-EI, Paragraph No. 13

54.05%



# Docket No. 070052-El PEF Rate of Return Report Exhibit No. \_\_\_\_ (JP-1) Page 13 of 15

Schedule 5

#### PROGRESS ENERGY FLORIDA Financial Integrity Indicators December 2006

### A: TIMES INTEREST EARNED WITH AFUDC

Earnings Before litterest			\$576,236,960
AFUDC - Debt			\$5,056,905
Income Taxes			\$193,440,642
Total			\$874,734,506
interest Charges			
(before deducting AFUD)	C-Debt)		\$155,524,490
TI.E. with AFUDC			5.52

#### B: TIMES INTEREST EARNED WITHOUT AFUDO

Earnings Before In	ferési	\$676.236.960
AFUDO Equity		(\$16,834,794)
Income Taxes		\$193,440 642
Total	and a second	\$852,842,808
interest Charges		
(before deducting)		\$155,524.490
T.I.E. withou	AFUDC	5.48

#### C: PERCENT AFUDC TO NET INCOME AVAILABLE FOR COMMON SHAREHOLDERS

SHAREHC	LDERS				1.1
		1.111.11		\$5,056,9	05
				(\$5,0	001
				\$5,064,9	05
	~~			\$16.834,7	94
DC				\$21,899,6	99
latie				n dia ing	- 1 1.
areholders		ار در از ارد. در از مراد در		\$326.724 5	31
FUDC to A	allable N	et incom			· ·
	DC Jatle Nareholders	DC Jakie narehokters	IDC Iatje archolders	DC ilatle	\$3,056.9 (\$5,0 \$5,064.9 <u>\$16,834.7</u> DC \$21,899,6 ifație ărcholders \$326,724.5

#### D: PERCENT INTERNALLY GENERATED FUNDS

Net Income	\$328.236.391
Common Dividends	(\$234,550,352)
Preferred Dividenus	(\$1,511,860)
AFUDC (Debt & ECS Other)	(\$21,891,699)
Depreciation & Amatization	\$409,873,656
Deferred Income Taxes	(\$42,363,927)
Investment Tax Credits	(\$6,410,000)
Deferred Fuel (Net)	\$403,584 738
Nuclear Fuel Amorization	\$23,468,052
Nuclear Refueling	\$13,506.021
Other - Incl Nuclear Decommissioning	(\$14,968,992).
Funds Provided from Operations	\$856,871,988

Other Funds Provided						
Incl Change in Working Capi	(a)		92		(\$4,35)	7,207)
Total Funds Provided					\$852,514	1.781
				<u> </u>		
Construction Experietures (e	xciudia	a AFUI	)Ci		\$734 48	- ROO

Percentage Internally Generated Funds 116.07%

## E: SHORT TERM DEBT / LONG TERM DEBT AS

PERCENT OF TOTAL INVESTOR CAPITAL	- FPSC
Common Equity	\$2.626,115,733
Preferred Stock	\$19,963 104
Long Term Debl - Fixed Rate	\$1,288,684,378
Short Term Debt	\$1
Total	\$3,934,763,215
% Long Term Debt - Fixed Rate	32,75%
% Short Term Debt	0.00%

## FPSC ADJUSTED AVERAGE

F.

RETURN ON COMMON EQUITY	Рго Роппа	FPSC
Average Earned Rate of Return	8.53%	8.539
Less Reconciled Average		
Retail Weighted Cost Rates for:		
Preferred Stock	0.02%	D.029
Long Term Debi - Fixed Rate	1.70%	1 70%
Short Term Debi	0.00%	0.009
Customer Deposits	0.13%	0 139
Investment Tax Credit (at Midpoint)		
cquely	0.03%	0.03
Debi	0.01%	0.019
Subtotal	1.89%	1.895
Total	8.64%	6.64%
Divided by Common Equity Fatio	60.35%	60.359
urisdictional Return on Common Equity	11.00%	11,007

#### ROGRESS ENERGY FLORIDA <sup>1</sup>UDC Rate Computation Report 
Schedule A & B (combined)

port

		System Per Books	AFUDC Adjustments to System	AFUDC Adjusted System	Retail Per Books	Pro Rata Adjustments	Specific Adjustments	Adjusted		Cost	Weighted
mmon Equity	(1)	\$2,633,063,251	\$0	\$2,633,063,251	\$2,089,913,458	(\$513,290,428)	لأراد والمحاد بالمعاومة ومعطو ويقادك متراكم	Retail	Ratio	Rate	Cost
sferred Stock	(2)	33,496,700	0	33,496,700	26,586,982		\$1,040,820.380	\$2,617,443,410	60.15%	11.75%	7.07%
ng Term Debt - Fixed	(2)	2,532,888,290	0,		2.010,402,645	(6,529,850);		20,057,121	0.46%	4.51%	0.02%
ort Term Debt	(3)	(74,286,975)	131,500,140	the second s	and the second	(493;762;230)	(220,846,764)	1,295,793,601	29.78%	5.74%	1.71%
stomer Deposits		the second s		01:210,100	45,411,201	(11,153,158)	(34,258.042)	1	0.00%	0.00%	0.00%
Active	(4)	150,338,406	0	150,338,406		an a					
Inactive	(4)	686,668	0	and the second	119,326,514	(29,307,030)	0	90,019,484	2.07%	6.22%	0.13%
estment Tax Credit			U	686,568	544,942	(133,040)	Ò	411,103	0.01%		
Post 70 Total	(5)	26,895,584	0 :	26.895.584	21,347,548	(5,243,036)					
Equity	(5)										
Debt	(5)				- <u>(*</u>			10,799,004	0.25%		
ferred Income Taxes	(4)	406,707,668	0	406,707,668	322,811,778	170 - DO - 170		5,305,508	0.12%		
S 109 DIT - Net	(4)	(61,220,561)	0	a series of the	وسويد سريقاني بالأمؤم وتستشفت وسفيفا منابع وتقا	(79,283,759)	107,478.530	351,006,548	8.07%		anta ang sa
				(01,220,501)	(48,591,949)	11,934,361	(2,375,898)	(39,033,486)	-0.90%		
Total		\$5,648,568,933	\$131,500,140	\$5,780,069,073	\$4,587,753,119	(\$1,126,769,031)	\$890,818,206	\$4,351,802,294	100.00%		8.93%

stnotes:

Common Equity cost rate is mid-point authorized in Docket No. 916890-E1

Cost rates are year end.

Balances and cost rates are daily weighted average for 13 months.

Balances and cost rates are 13 month average.

Post 70 ITC credits assigned a zero-cost rate per HPSC Order No. 19282. Docket No. 880157-EL

Docket No. 070052-EI PEF Rate of Return Report Exhibit No. \_\_\_\_ (JP-1) Page 15 of 15 SCHEDULE 6

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# PROGRESS ENERGY FLORIDA Rate of Return Report SUMMARY OF SEBRING RIDER STATUS For the Month of December 2005

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	PARTI-SUM	MARY			
			Total Flowerd		
Dollars to be Recovered:			Total Period	ti de la companya de	
Medium Term Note	- Principal		\$30,700.000		
Medium Term Note			19,615,117		
Final Principal True	-цр		198,104		
Other Interest Expe	nse (Net)	Note a	9,373		
			50,522,594		
Regulatory Assessn	nent Fee	Note a	42,108		
Total			\$50,564,702		
Period - April 1, 1993 - Marci	6 24 2000				
	11.01, 2006		<b>5</b> 1	Years	
15 Year KWH Sales Forecas	iled	Note a	3,262,361,000	KWH	
			Period to Date		
Dollars Recovered and Other					
Principal and interes			\$45,102.716		
Regulatory Assessm			35,639		ایک موجع این اسمو توجه استر مربوعی ایرو افران
Interest and Other A Total	ajustments	Note b	916.070		
			\$46.054,425		
KWH Sales to date			2,823,387,354	KIAH	
			21020.007,004		
Length of period elapsed		13 Years	8	Months	
tengar of portion of apolica					
		CURRENT STAT	n an	D.1 Not Payanta	
Sales Sta	tistics - KWH	CURRENT STAT	S	R-1 Net Revenue:	
Sales Sta	tistics - KWH Forecast		Actual S	Forecast \$	Differen
Sales Sta           Actual           Oct 06         22,072,765           Nov 06         19,864,696	tistics - KWH Forecast 22,171,000 3 19,541,000		S	Forecast \$ \$337,643	Differen (\$5
Cot 06 22:072:765 Nov 06 19,864.695 Dec 06 19,569,478	tistics - KWH Forecast 9 22,171,000 19,541,000 19,706,000	]	Actual S \$283,845	Forecast \$ \$337,643	Differen
Cot 06 Sales Sta Actual Oct 06 22;072.766 Nov 06 19,864,699 Dec 06 19,569,478 Jan 07	tistics - KWH Forecast 22,171,000 3 19,541,000 3 19,706,000 21,231,000	]	Actual S \$283,845 \$255,703 \$251,571 \$0	Forecast \$ \$337,643 \$297,590	Differen (\$!
Cot 06 Sales Sta Oct 06 22,072,766 Nov 06 19,864,690 Dec 06 19,569,476 Jan 07 Feb 07	tistics - KWH Forecast 9 22,171,000 3 19,541,000 3 19,706,000 21,231,000 20,424,000	]	Actual S \$283,845 \$255,703 \$251,571 \$0 \$0	Forecast \$ \$337,643 \$297,590 \$300,103 \$323,327 \$311,035	Differen (\$!
Cot 06 Sales Sta Actual Oct 06 22;072.766 Nov 06 19,864,699 Dec 06 19,569,478 Jan 07	tistics - KWH Forecast 22,171,000 3 19,541,000 3 19,706,000 21,231,000	]	Actual S \$283,845 \$255,703 \$251,571 \$0	Forecast \$ \$337,643 \$297,590 \$300,103 \$323,327	Differen (\$!
Cot 06 Sales Sta Oct 06 22,072,766 Nov 06 19,864,690 Dec 06 19,569,476 Jan 07 Feb 07	tistics - KWH Forecast 9 22,171,000 3 19,541,000 3 19,706,000 21,231,000 20,424,000	]	Actual S \$283,845 \$255,703 \$251,571 \$0 \$0	Forecast \$ \$337,643 \$297,590 \$300,103 \$323,327 \$311,035	Differen (\$!
Cot 06 Sales Sta Oct 06 22,072,766 Nov 06 19,864,690 Dec 06 19,569,476 Jan 07 Feb 07	tistics - KWH Forecast 22,171,000 19,541,000 19,706,000 21,231,000 20,424,000 19,096,000	]	Actual S \$263,845 \$255,703 \$251,571 \$0 \$0 \$0	Forecast \$ \$337,643 \$297 590 \$300,103 \$323,327 \$311,038 \$290,814	Differen (\$!
Cot 06 Stales Sta Actual Oct 06 22,072,766 Nov 06 19,864,698 Dec 06 19,569,478 Jan 07 Feb 07 Mar 07	tistics - KWH Forecast 22,171,000 19,541,000 19,706,000 21,231,000 20,424,000 19,096,000	]	Actual S \$283,845 \$255,703 \$251,571 \$0 \$0 \$0	Forecast \$ \$337,643 \$297 590 \$300,103 \$323,327 \$311,038 \$290,814	Differen (\$!
Coct 06 Oct 06 Nov 06 Dec 06 Jan 07 Feb 07 Mar 07 Fider (SR-1) Rate	tistics - KWH Forecast 22,171,000 19,541,000 19,706,000 21,231,000 20,424,000 19,096,000	]	Actual \$ \$263,845 \$255,703 \$251,571 \$0 \$0 \$0 \$0 \$0	Forecast \$ \$337,643 \$297 590 \$300,103 \$323,327 \$311,038 \$290,814	Differen (\$!
Coct 06 Sales Sta Actual Oct 06 22,072,766 Nov 06 19,864,698 Dec 06 19,569,476 Jan 07 Feb 07 Mar 07 Fider (SR-1) Rate	tistics - KWH Forecast 22,171,000 19,541,000 19,706,000 21,231,000 20,424,000 19,096,000	]	Actual S \$283,845 \$255,703 \$251,571 \$0 \$0 \$0 Effective August 20 December	Forecast \$ \$337,643 \$297 590 \$300,103 \$323,327 \$311,038 \$290,814	Differen (\$!
Cot 06 Sales Sta Actual Oct 06 Nov 06 19,864,699 Dec 06 19,569,475 Jan 07 Feb 07 Mar 07 Fider (SR-1) Rate Dver/(Under) Recovery Balance - Béginning Month Balance	tistics - KWH Forecast 2,171,000 19,541,000 19,706,000 21,231,000 20,424,000 19,096,000	] Cents per KWH	S           Actual S           \$283,845           \$255,703           \$251,571           \$0	Forecast \$ \$337,643 \$297 590 \$300,103 \$323,327 \$311,038 \$290,814	Differen (\$!
Correction Series States State	tistics - KWH Forecast 22,171,000 19,541,000 19,706,000 21,231,000 20,424,000 19,096,000 1,293 1,293	] Cents per KWH	Actual S \$283,845 \$255,703 \$251,571 \$0 \$0 \$0 Effective August 20 December	Forecast \$ \$337,643 \$297 590 \$300,103 \$323,327 \$311,038 \$290,814	Differen (\$!
Sales Sta Actual Oct 06 22,072,766 Nov 06 19,864,696 Dec 06 19,864,696 Dec 06 19,569,478 Jan 07 Feb 07 Mar 07 Feb 07 Mar 07 Fider (SR-1) Rate Dver/(Under) Recovery Balance - Beginning Month Balance SR-1 Revenues (Net Payment of Principal a	tistics - KWH Forecast 2,171,000 19,541,000 19,706,000 21,231,000 20,424,000 19,096,000 -1,293	] Cents per KWH	S           Actual S           \$253,845           \$255,703           \$251,571           \$0	Forecast \$ \$337,643 \$297 590 \$300,103 \$323,327 \$311,038 \$290,814	Differen (\$!
Coct 06 Sales Sta Actual Oct 06 22:072:765 Nov 06 19:864.695 Dec 06 19:569.475 Jan 07 Feb 07 Mar 07 Fider (SR-1) Rate Sider (SR-1) Rate Dver/(Under) Recovery Balance SR-1 Revenues (Net Payment of Principal Final Principal Tue-u Adjustments	tistics - KWH Forecast 2, 171,000 19, 541,000 19, 706,000 21, 231,000 20, 424,000 19, 096,000 19, 096,000 19, 096,000 1, 293	] Cents per KWH	S           Actual S           \$253,845           \$255,703           \$251,571           \$0	Forecast \$ \$337,643 \$297 590 \$300,103 \$323,327 \$311,038 \$290,814	Differen (\$!
Sales Sta Actual Oct 06 22,072,765 Nov 06 19,864,695 Dec 06 19,569,475 Jan 07 Feb 07 Mar 07 Fider (SR-1) Rate State Dver/(Under) Recovery Balance - Béginning Month Balance SR-1 Revenues (Net - Payment of Principal a Final Principal Tfue-uj Adjustments Interest on Balance	tistics - KWH Forecast 2, 171,000 19, 541,000 19, 706,000 21, 231,000 20, 424,000 19, 096,000 19, 706,000 19, 706,000 20, 424,000 19, 096,000 19, 706,000 20, 424,000 19, 096,000 19, 706,000 20, 424,000 19, 096,000 19, 706,000 20, 424,000 19, 096,000 20, 424,000 19, 096,000 20, 424,000 20, 424,0000	] Cents per KWH	Actual S           \$283,845           \$255,703           \$251,571           \$0           \$1	Forecast \$ \$337,643 \$297,590 \$300,103 \$323,327 \$311,038 \$290,814 06 Billings	Differen (\$!
Sales Sta Actual Oct 06 Nov 06 19,864,699 Dec 06 19,569,475 Jan 07 Feb 07 Mar 07 Fider (SR-1) Rate Dver/(Under) Recovery Balance - Beginning Month Balance SR-1 Revenues (Net Payment of Principal a Find! Principal True-u Adjustments Interest Adjustme	tistics - KWH Forecast 2,171,000 19,541,000 19,706,000 21,231,000 20,424,000 19,096,000 1,293 0,424,000 19,096,000 1,293 1,293 0,424,000 19,096,000 1,293 0,424,000 19,096,000 1,293 0,424,000 19,096,000 1,293 0,424,000 19,096,000 1,293 1,293 0,424,000 19,096,000 1,293 1,295 1,293 1,295 1,295 1,295 1,295 1,295 1,295 1,295 1,295 1,295 1,295 1,295 1,295 1,295 1,295	] Cents per KWH Fees)	S           Actual S           \$253,845           \$255,703           \$251,571           \$0	Forecast \$ \$337,643 \$297,590 \$300,103 \$323,327 \$311,038 \$290,814 06 Billings	Differen (\$!
Sales Sta Actual Oct 06 Nov 06 19,864,699 Dec 06 19,569,475 Jan 07 Feb 07 Mar 07 Fider (SR-1) Rate Dver/(Under) Recovery Balance - Beginning Month Balance SR-1 Revenues (Net Payment of Principal a Find! Principal True-u Adjustments Interest Adjustme	tistics - KWH Forecast 2, 171,000 19, 541,000 19, 706,000 21, 231,000 20, 424,000 19, 096,000 19, 706,000 19, 706,000 20, 424,000 19, 096,000 19, 706,000 20, 424,000 19, 096,000 19, 706,000 20, 424,000 19, 096,000 19, 706,000 20, 424,000 19, 096,000 20, 424,000 19, 096,000 20, 424,000 20, 424,0000	] Cents per KWH Fees)	Actual S           \$283,845           \$255,703           \$251,571           \$0           \$1	Forecast \$ \$337,643 \$297,590 \$300,103 \$323,327 \$311,038 \$290,814 06 Billings	Differen (\$!
Sales Sta Actual Oct 06 22,072,766 Nov 06 19,864,696 Dec 06 19,569,476 Jan 07 Feb 07 Mar 07 Fider (SR-1) Rate Dver/(Under) Recovery Balance - Beginning Month Balance SR-1 Revenues (Net Payment of Principal a Final Principal True-u Adjustments Interest on Balan- interest Adjustme Revenue Adjustme	tistics - KWH Forecast 2 22,171,000 3 19,541,000 3 19,706,000 21,231,000 20,424,000 19,096,000 19,096,000 1,293 1,293 01 Reg Assessment and Interest p ce nt ients - Back Billing I	] Cents per KWH Fees) Error	S           Actual S           \$283,845           \$255,703           \$251,571           \$0           \$0           \$0           \$0           \$0           \$0           \$0           \$0           \$0           \$0           \$0           \$0           \$1,373,226           \$251,571           \$6,571           \$0           \$0	Forecast \$ \$337,643 \$297,590 \$300,103 \$323,327 \$311,038 \$290,814 06 Billings	Differen (\$!
Sales Sta Actual Oct 06 Nov 06 19,864,699 Dec 06 19,569,475 Jan 07 Feb 07 Mar 07 Fider (SR-1) Rate Dver/(Under) Recovery Balance - Beginning Month Balance SR-1 Revenues (Net Payment of Principal a Find! Principal True-u Adjustments Interest Adjustme	tistics - KWH Forecast 2 22,171,000 3 19,541,000 3 19,706,000 21,231,000 20,424,000 19,096,000 19,096,000 1,293 1,293 01 Reg Assessment and Interest p ce nt ients - Back Billing I	] Cents per KWH Fees) Error	Effective August 20 December \$ 1,373,228 251,571 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	Forecast \$ \$337,643 \$297,590 \$300,103 \$323,327 \$311,038 \$290,814 06 Billings	Differen (\$!
Sales Sta Actual Oct 06 22:072:766 Nov 06 19,864,698 Dec 06 19,864,698 Dec 06 19,569,476 Jan 07 Feb 97 Mar 07 Fider (SR-1) Rate Signaling Month Balance SR-1 Revenues (Net. Payment of Principal a Final Principal True-u Adjustments Interest on Balanci interest Adjustme Revenue Adjustme Revenue Adjustme	tistics - KWH Forecast 2,171,000 19,541,000 19,706,000 21,231,000 20,424,000 19,096,000 19,006,000 10,006,000 10,0000	] Cents per KWH Fees) Error	S           Actual S           \$283,845           \$255,703           \$251,571           \$0           \$0           \$0           \$0           \$0           \$0           \$0           \$0           \$0           \$0           \$0           \$0           \$1,373,226           \$251,571           \$6,571           \$0           \$0	Forecast \$ \$337,643 \$297,590 \$300,103 \$323,327 \$311,038 \$290,814 06 Billings	Differen (\$!
Sales Sta Actual Oct 06 22:072.766 Nov 06 19,864,698 Dec 06 19,569,476 Jan 07. Feb 07 Mar 07 Fider (SR-1) Rate Dver/(Under) Recovery Balance - Beginning Month Balance SR-1 Revenues (Net. Payment of Principal Final Principal True-u Adjustments Interest on Balanci interest Adjustme Revenue Adjustme EOM Balance Available for new	tistics - KWH Forecast 2,171,000 19,541,000 19,706,000 21,231,000 20,424,000 19,096,000 19,006,000 10,006,000 10,0000	] Cents per KWH Fees) Error	Actual S           \$283,845           \$255,703           \$255,703           \$251,571           \$0           \$0           \$0           \$0           \$0           \$0           \$0           \$0           \$0           \$0           \$0           \$0           \$0           \$0           \$0           \$0           \$0           \$0           \$0           \$1,631,367	Forecast \$ \$337,643 \$297,590 \$300,103 \$323,327 \$311,038 \$290,814 06 Billings	Differen (\$!
Sales Sta Actual Oct 06 22:072:766 Nov 06 19,864,698 Dec 06 19,864,698 Dec 06 19,569,476 Jan 07 Feb 97 Mar 07 Fider (SR-1) Rate Signaling Month Balance SR-1 Revenues (Net. Payment of Principal a Final Principal True-u Adjustments Interest on Balanci interest Adjustme Revenue Adjustme Revenue Adjustme	tistics - KWH Forecast 2,171,000 19,541,000 19,706,000 21,231,000 20,424,000 19,096,000 19,006,000 10,006,000 10,0000	] Cents per KWH Fees) Error	S           Actual S           \$283,845           \$255,703           \$251,571           \$0           \$0           \$0           \$0           \$0           \$0           \$0           \$0           \$0           \$0           \$0           \$0           \$1,373,226           \$251,571           \$6,571           \$0           \$0	Forecast \$ \$337,643 \$297,590 \$300,103 \$323,327 \$311,038 \$290,814 06 Billings	Differen (\$!

Updated per FPSC Order No. PSC-93-1519-FOF-EI and September 1996 update filed with the FPSC. Other adjustments (net) may include true-up adjustments from final close-out transactions.

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Dccket No. 070052-EI USNRC Power Uprates Exhibit No. \_\_\_\_ (JP-2) Page 1 of 8

# Backgrounder



Office of Public Affairs Telephone: 301/415-8200 E-mail: opa@nrc.gov

# **Power Uprates for Nuclear Plants**

## Background

Utilities have been using power uprates since the 1970s as a way to increase the power output of their nuclear plants. The NRC has completed 102 such reviews to date, resulting in a gain of approximately 12,650 MWt (megawatts thermal) or 4,216 MWe (megawatts dectric) at existing plants (see Table 1). Collectively, an equivalent of about four nuclear power plant units has been gained through implementation of power uprates at existing plants. NRC licensees have indicated they plan to ask for power uprates over the next four years, that if approved, would add another 2,841 MWt (947 MWe) to the nation's generating capacity.

## Discussion

To increase the power output of a reactor, typically a more highly enriched uranium fuel is added. This enables the reactor to produce more thermal energy and therefore more steam, driving a turbine generator to produce electricity. In order to accomplish this, components such as pipes, valves, pumps, heat exchangers, electrical transformers and generators, must be able to accommodate the conditions that would exist at the higher power level. For example, a higher power level usually involves higher steam and water flow through the systems used in converting the thermal power into electric power. These systems must be capable of accommodating the higher flows.

In some instances, licensees will modify and/or replace components in order to accommodate a higher power level. Depending on the desired increase in power level and original equipment design, this can involve major and costly modifications to the plant such as the replacement of main turbines. All of these factors must be analyzed by the licensee as part of a request for a power uprate, which is accomplished by amending the plant's operating license. The analyses must demonstrate that the proposed new configuration remains safe and that measures continue to be in place to protect the health and safety of the public. These analyses are reviewed by the NRC before a request for a power uprate is approved.

Power uprates can be classified in three categories: (1) measurement uncertainty recapture power uprates, (2) stretch power uprates, and (3) extended power uprates.

	PUBLIC SERVICE COMMISSION
DOCKET N	0. <u>070052-ET</u> exhibit <u>17</u>
COMPANY	FIPUG
WITNESS	JEFFRY Pollock (JP-2)
DATE	08107 + 08107

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1) Measurement uncertainty recapture power uprates are power increases less than two percent and are achieved by using enhanced techniques for calculating reactor power. This involves the use of state-of-the-art devices to more precisely measure feedwater flow which is used to calculate reactor power. More precise measurements reduce the degree of uncertainty in the power level which is used by analysts to predict the ability of the reactor to be safely shut down under some accident conditions.

2) Stretch power uprates are typically on the order of up to seven percent and usually involve changes to instrumentation settings. Stretch power uprates generally do not involve major plant modifications. This is especially true for boiling-water reactor plants. In some limited cases where plant equipment was operated near capacity prior to the power uprate, more substantial changes may be required.

3) Extended power uprates are usually greater than stretch power uprates and have been approved for increases as high as 20 percent. Extended power uprates usually require significant modifications to major pieces of plant equipment such as the high pressure turbines, condensate pumps and motors, main generators, and/or transformers.

### **Review Process**

Power uprates are submitted to NRC as license amendment requests. The applications and reviews are complex and involve many areas of NRC including various technical divisions of the Office of Nuclear Reactor Regulation and the Office of the General Counsel. Some reviews may also involve the Office of Nuclear Regulatory Research and the Advisory Committee on Reactor Safeguards. In evaluating a power uprate request, NRC reviews data and accident analyses submitted by a licensee to confirm that the plant can operate safely at the higher power level. Reviews of power uprate requests are a high priority and are therefore, being conducted on accelerated schedules.

Regulatory Issue Summary (RIS) 2002-03, "Guidance on the Content of Measurement Uncertainty Recapture Power Uprate Applications," dated January 31, 2002, covers analyses of the effect of the power uprate on things such as electrical equipment, major plant systems, and emergency operating procedures. The RIS outlines the staff's information needs for reviewing measurement uncertainty recapture power uprate applications and is intended to result in a more efficient and effective review process. Standardization of licensee's submittals, improvements in the quality of submittals, and more focused reviews by the staff could improve the timeliness of power uprate reviews.

Based on results of its industry survey, NRC expects to receive only one stretch power uprate over the next five years. Therefore, NRC's efforts for improving the power uprate application and review processes initially focused on measurement uncertainty and extended power uprates. Efficiencies gained there will be applied to improve the stretch power uprate review process.

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Reviews of extended power uprate applications were initially estimated to take up to 18 months, but have been completed more quickly. The Duane Arnold, Dresden 2 and 3, and Quad Cities 1 and 2 extended power uprates were completed in just under 12 months. This included coordination and review with the NRC's Advisory Committee for Reactor Safeguards -- an independent panel of technical experts from diverse fields that advises the Commission.

The NRC issued a review standard for extended power uprates, RS-001, in December 2003. The standard is a first-of-a-kind document that provides a comprehensive process and technical guidance for reviews by the NRC staff, and also provides useful information to licensees considering applying for an extended uprate. The NRC's Advisory Committee on Reactor Safeguards endorsed RS-001 as an "excellent review standard." The staff is currently using this standard to review the proposed uprates for Vermont Yankee (20 %), Waterford (8 %), Browns Ferry Unit 1 (20 %), Browns Ferry Units 2 and 3 (15 %), and Beaver Valley Units 1 and 2 ( 8 %). The staff will closely monitor these uprate reviews to identify any issues related to using RS-001.

To keep the public informed of its activities, NRC publishes a notice in the *Federal Register* (1) when it receives a request from a licensee for a power uprate, giving the public the opportunity to request a hearing; (2) after a finding of no significant environmental impact is made, if applicable; and (3) if a power uprate is approved. A press release is also issued if a power uprate is approved.

## **Plant-Specific Applications Under Review**

The NRC usually has several applications for power uprates under review at any given time. An updated list of applications under review can be found on the NRC's Web site at this address: <u>http://www.nrc.gov/reactors/operating/licensing/power-uprates/pending-applications.html</u>.

## **Steam Dryer Issues Following Uprates**

Since 2002, steam dryer cracking and flow-induced vibration damage on components and supports for the main steam and feedwater lines have been observed at the Dresden and Quad Cities nuclear power plants, both of which use boiling water reactors, following implementation of extended power uprates. NRC staff have determined these issues do not pose an immediate safety concem, given the plants' current operating conditions. However, steam dryers and other internal main steam and feedwater components must maintain structural integrity to avoid generating loose parts that could impact safety system or reactor plant operation. The NRC has corresponded with and met with nuclear industry groups concerning these issues since the first occurrences, and continues to examine its regulatory options based on industry actions and the information available.

## **Future Actions**

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Licensees have told NRC they plan to submit 18 power uprate applications in the next four years as follows:

- 10 extended power uprates
- 1 stretch power uprate
- 7 measurement uncertainty recapture power uprates

Based on the information provided, planned power uprates are expected to result in an increase of about 2,841 MWt. An updated list of anticipated future applications can be found on the NRC's Web site at this address:

http://www.nrc.gov/reactors/operating/licensing/power-uprates/expected-applications.html

Tables

- <u>Table 1 Approved Power Uprates as of November 2004</u>
- Table 2 Power Uprates Currently Under Review as of November 2004
- <u>Table 3 Expected Future Submittals for Power Uprates as of October 2004</u>

## Table 1 - Approved Power Uprates

(TYPE -- S = Stretch; E = Extended; MU = Measurement Uncertainty Recapture)

				·•	
NO.	Plant	% Uprate	Mwt	Year Approved	TYPE
1	Calvert Cliffs 1	5.5	140	1977	S
2	Calvert Cliffs 2	5.5	140	1977	S
3	Millstone 2	5	140	1979	S
4	H. B. Robinson	4.5	100	1979	S
5	Fort Calhoun	5.6	80	1980	S
6	St. Lucie 1	5.5	140	1981	S
7	St. Lucie 2	5.5	140	1985	S
8	Duane Arnold	4.1	65	1985	S
9	Salem 1	2	73	1986	S
10	North Anna 1	4.2	118	1986	S
11	North Anna 2	4.2	118	1986	S
12	Callaway	4.5	154	1988	S
13	TMI-1	1.3	33	1988	S
14	Fermi 2	4	137	1992	S
15	Vogtle 1	4.5	154	1993	S
16	Vogtle 2	4.5	154	1993	S
17	WolfCreek	4.5	154	1993	S

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18	Susquehanna 2	4.5	148	1994	S	
19	Peach Bottom 2	5	165	1994	S	
20	Limerick 2	5	165	1995	S	
21	Susquehanna 1	4.5	148	1995	S	
22	Nine Mile Point 2	4.3	144	1995	S	
23	WNP-2	4.9	163	1995	S	
24	Peach Bottom 3	5	165	1995	S	
25	Surry 1	4.3	105	1995	S	
26	Surry 2	4.3	105	1995	S	
27	Hatch 1	5	122	1995	S	
28	Hatch 2	5	122	1995	S	
29	Limerick 1	5	165	1996	S	
30	V. C. Summer	4.5	125	1996	S	
31	Palo Verde 1	2	76	1996	S	
32	Palo Verde 2	2	. 76	1996 "	S	
33	Palo Verde 3	2	76	1996	S	
34	Turkey Point 3	4.5	100	1996	S	
35	Turkey Point 4	4.5	100	1996	S	
36	Brunswick 1	5	122	1996	S	
37	Brunswick 2	5	122	1996	S	
38	Fitzpatrick	4	100	1996	S	
39	Farley 1	5	138	1998	S	
40	Farley 2	5	138	1998	S	
41	Browns Ferry 2	5	164	1998	S	
42	Browns Ferry 3	5	164	1998	S	
43	Monticello	6.3	105	1998	E	
44	Hatch 1	8	205	1998	E	
45	Hatch 2	8	205	1998	E	
46	Comanche Peak 2	1	34	1999	MU	
47	LaSalle 1	5	166	2000	S	
48	LaSalle 2	5	166	2000	S	
49	Perry	5	178	2000	S	

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50	River Bend	5	145	2000	S
51	Diablo Canyon 1	2	73	2000	S
52	Watts Bar	1.4	48	2001	MU
53	Byron 1	5	170	2001	S
54	Byron 2	5	170	2001	S
55	Braidwood 1	5	170	2001	S
56	Braidwood 2	5	170	2001	S
57	Salem 1	1.4	48	2001	MU
58	Salem 2	1.4	48	2001	MU
59	San Onofre 2	1.4	48	2001	MU
60	San Onofre 3	1.4	48	2001	MU
61	Susquehanna 1	1.4	48	2001	MU
62	Susquehanna 2	1.4	48	2001	MU
63	Hope Creek	1.4	46	2001	MU
64	Beaver Valley 1	1.4	37	2001	MU
65	Beaver Valley 2	1.4	37	2001	MU
66	Shearon Harris	4.5	138	2001	S
67	Comanche Peak 1	1.4	47	2001	MU
68	Comanche Peak 2	0.4	13	2001	MU
69	Duane Arnold	15.3	248	2001	E
70	Dresden 2	17	430	2001	E
71	Dresden 3	17	430	2001	E
72	Quad Cities 1	17.8	446	2001	E
73	Quad Cities 2	17.8	446	2001	E
74	Waterford 3	1.5	51	2002	MU
75	Clinton	20	579	2002	E
76	South Texas 1	1.4	53	2002	MU
77	South Texas 2	1.4	53	2002	MU
78	ANO-2	7.5	211	2002	E
19	Sequoyah 1	1.3	44	2002	MU
30	Sequoyah 2	1.3	44	2002	MU
1	Brunswick 1	15	365	2002	E

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82	Brunswick 2	15	365	2002	E
83	Grand Gulf	1.7	65	2002	MU
84	H. B. Robinson	1.7	39	2002	MU
85	Peach Bottom 2	1.62	56	2002	MU
86	Peach Bottom 3	1.62	56	2002	MU
87	Indian Point 3	1.4	42.4	2002	MU
88	Point Beach 1	1.4	21.5	2002	MU
89	Point Beach 2	1.4	21.5	2002	MU
90	Crystal River 3	0.9	24	2002	S
91	D.C. Cook 1	1.66	54	2002	MU
92	River Bend	1.7	52	2003	MU
93	D.C. Cook 2	1.66	57	2003	MU
94	Pilgrim	1.5	30	2003	MU
95	Indian Point 2	1.4	43	. 2003	MU
96	Kewaunee	1.4	23	2003	MU
97	Hatch 1	1.5	41	2003	MU
98	Hatch 2	1.5	41	2003	MU
99	Palo Verde 2	2.9	114	2003	S
100	Kewzunee	6.0	99	2004	S
01	Palisades	1.4	35	2004	MU
02	Indian Point 2	3.2	101.6	2004	S

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 Table 2 - Power Uprates Under Review

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No.	Plant	% Uprate	MWt	Submittal Date	Projected Completion Date	Туре		
1	Vermont Yankee	20	319	09/10/03	TBD	E		
2	Waterford	8	275	11/13/03	April 2005	E		
3	Seebrook	5.2	176	03/17/04	Feb. 2005	S		
4	Indian Point 3	4.85	148	06/03/04	March 2005	S		
5	Browns Ferry 2	15	494	06/25/04	TBD	E		
6	Browns Ferry 3	15	494	06/25/04	TBD	Е		
7	Browns Ferry 1	20	659	06/28/04	TBD	Е		
8	Palo Verde 1	2.94	114	07/09/04	March 2005	S		
9	Palo Verde 3	2.94	114	07/09/04	March 2005	S		
10	Beaver Valley 1	8	211	10/04/04	TBD	Е		
11	Beaver Valley 2	8	211	10/04/04	TBD	E		

(TYPE -- S = Stretch; E = Extended; MU = Measurement Uncertainty Recapture)

Table 3 - Expected Future Submittals for Power Uprates

<u>Fiscal</u> <u>Year</u>	<u>Total</u> <u>Uprates</u> Expected	<u>Measurement</u> <u>Uncertainty</u> <u>Recapture</u> <u>Uprates</u>	<u>Stretch</u> <u>Power</u> <u>Uprates</u>	<u>Extended</u> <u>Power</u> <u>Uprates</u>	<u>Megawatts</u> <u>Thermal</u>	Approximate Megawatts <u>Electric</u>
2005	8	4	<u>0</u>	<u>4</u>	1,315	438
2006	3	3	0	0	161	54
2007	6	0	1	5	843	281
2008	1	0	0	1	522	174
TOTAL	18	7	1	10	2,841	947

June 2005

Docket No. 070052-EI Impact of Sales Growth Exhibit No. \_\_\_ (JP-3) Page 1 of 1

# PROGRESS ENERGY FLORIDA Impact of Sales Growth on Base Rate Recovery

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				11 12 12 12 1
Line	Description	Base Rates Set	Year One Load Growth	Year Two Load Growth
		(1)	(2)	(3)
1	Base Rate Costs	\$50,000		
2	Electricity Sales (MWh)	1,000	1,030	<b>1,061</b>
3	Average Base Rate Cost (\$/MWh)	\$50	\$50	\$50
4	Base Rate Revenue		\$51,500	\$53,045
5	Additional Base Rate Cost Recovery		\$1,500	\$3,045

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# FLORIDA PUBLIC SERVICE COMMISSION

DOCKET N	10.070052-EI EXHIBIT 19
COMPANY	FIPUG
WITNESS	JEFFRY Pollock (JF4)
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Pronting	Energy Florida	<u> </u>	•					CCR	ket No. 0700 C vs. Fuel C	ause	Exhbil_JP-1P
Capacity Calculatio Using Cu	Cost Recovery Clause on of Capacity Clause Recovery Fact strent 12 CP & 1/13th AD Allocation N (ear 2007		emand			i <sup>r</sup>			ibit No ( e 1 of 1	JP-4)	Section C Page 4 of 5
		(1)	(2)	(3):	·(4)	(5)	(6)	(7)	(8)	(9)	(10)
Rale Cia	185	Average 12CP Load Factor at Meter (%)	Salas dt Meter (mVVh)	Avg 12 CP at Meter (MW) (2)(0760hm/(1))	Delivery Efficiency Factor	Sales at Source (Generation) (mWh) (2)(4)	Avg 12 CP at Source (MW) (3)(4)	Annual Average: Demand (0)4780hrs	Annual Average Demand Allocator (%)	12CP Demand Transmission Allocator (%)	12CP & 1/13 AD Demand Allocator (%)
Residen	ntial								<u></u>		
RS-1, R	ST-1, RSL-1, RSL-2, RSS-1 Secondary	0,550	20,912,280	4,340,45	0.9344227	22,379,693	4,645.08	2;554.78	51.462%	80,948%	60.218%
General GS-1, G	I Service Non-Demand				•	22,010,000	4,040.00	2,034.10	31.402 %	00,840%	00.21076
, -	Secondary	0,658	1,365,672	236.93	0.9344227	1,461,514	253.56	186.84	3.361%	3.327%	3.330%
	Primary Transmission	0.658 0.658	6,768	1,17	0.9683000	6,990	1.21	0.80	0.016%	0.016%	0.016%
	1101231111481211	.0.006	3,247	0,56	0.9783000	3,319	0.58	D.38	0.008%	0.008%	0.008%
	I Service								0.004 /	3.33014	3,333 /8
GS-2	Secondary	1.000	82,483	9.42	0.9344227	88,272	10.08	10.08	0.203%	0,132%	0.138%
	1 Service Demand GSDT-1										
	Secondary	0.789	12,650,152		0.9344227	13,537,933	1,958.72	1,545.43	31.130%	25.700%	
	Primary Transmission	0.789	2,404,893		0.9883000	.2,483,824	359.34	283.52	5,711%	4.715%	
SS-1	Primary	1.264	0		0.9683000		0.00 0.00	0.00 0.00	0.000%	0.000% 0.000%	
	Transm Del/ Transm Mir	1,264	17,286		0.9783000	17,669	1.60	2.02	0.041%	0,021%	
	Transm Dell Primary Mir	1.264	8,113		0.9683000			0.96	0.019%	0,010%	
Curtail	de tê								36.901%	30,446%	30.943%
	ranie CST-1, CS-2, CST-2, SS-3										
	Secondary	1.093	c	0.00	0.9344227	0.00	0.00	0.00	0.000%	0.000%	0.000%
	Pilmary	1.093	358,088		0.9683000		38.62	42.22	0,850%	0.507%	
35-3	Primary	-	5,761	0.00	0.9683000			0.68	0.014%	0,000%	
Interru						• •			0.864%	0.507%	0.634%
13-1, 18	ST-1, IS-2, IST-2 Secondary	0.927	117,778	14.50	0.9344227	470 044	10 50		0 0004	n na 14	0.210%
	Primary Del / Primary Mir	0.927	1,874,180		0.9344227			14,38 220.95	0.290%	0.204%	
	Primary Del / Transm Mtr	0.927	2,160		0.9783000			0,25		0.004%	
	Transm Dell Transm Mir	0,927	478,76		0.9783000			55.63		0.7879	
	Transm Del/ Primary Mir	0,927	81,18	10.00		83,899		9,57	0.193%	0,135%	
<b>SS-2</b>	Primary	0.749	. (					0.00		0.000%	
	Transm Del/ Transm Mtr	0.749	87,94					10.28		0.1805	
	Transm Del/ Primary Mir	0.749	49,40	7,53	0.9683000	51,021	7.78	5.82	0.117%	0.1025	
Lightir	NG										
	Secondary)	6.746	326,06	5.52	0.9344227	348,947	5.90	39,83	0.802%	0.0779	6 0.133%
	· ·		40,830,22	4 7:147:18		43,488,188	7,621.36	4:964.41	100:000%	100.0005	4 .100.000%

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Notes:

Average 12CP load factor based on load research study filed July 31, 2003 Projected KWh sales for the period January 2006 to December 2006 Calculated: Column 2 / (8,760 hours x Column 1) Based on system average line loss analysis for 2004 Column 2 / Column 4

- (1) (2) (3) (4) (5)

- Column 3 / Column 4 Calculated: Column 6 / 8,760 hours Column 7/ Total Column 7 Column 8 / Total Column 6 Column 8 x 1/13 + Column 9 x 12/13 (6) (7) (8) (9) (10)

Ruth according to my understanding after talking to Lisa Bennett, Exhibits 20,23 & 25 were not marked of admitted during the hearing & are not part of the record.

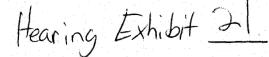
FLORIDA PUBLIC SERVICE COMMISSION DOCKET NO. 070052 EAEXHIBIT 20 COMPANY WITNESS se above DATE

DOCKET NO 070052-EI

EXTRACT FROM 2005 TEN YEAR SITE PLAN FIPUG EXHIBIT 2/

ID # 2/

# Progress Energy Florida Ten-Year Site Plan



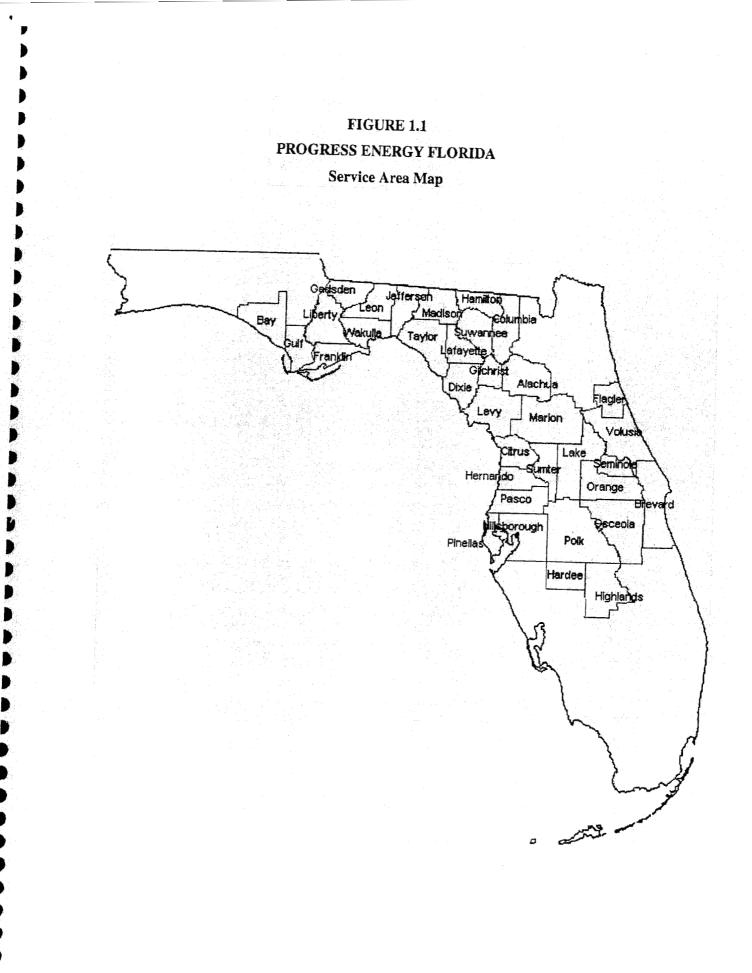
April 2005

2005-2014

Submitted to: Florida Public Service Commission



FLORIDA PUBLIC SERVICE COMMISSION DOCKET NO.070052-EZHIBIT 21 COMPANY FIPUG WITNESS REF Ten year Site Plans DATE 08 07+08/07 03245 APR-18 FPSC-COMMISSION CLERK



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SCHEDULE |

EXISTING GENERATING FACILITIES

AS OF DECEMBER 31, 2004

COMBUSTION TURBINE         AVON PARK       P1       HIGHLANDS       GT       NG       DFO       TK       3       12/68       33.790       26         AVON PARK       P2       HIGHLANDS       GT       DFO       WA       5/72-6/72       111,400       92         BARTOW       P1.P3       PINELLAS       GT       NG       DFO       VA       8       06/72       55,700       46         BARTOW       P4       PINELLAS       GT       NG       DFO       PL       WA       8       06/72       55,700       49         BARTOW       P4       PINELLAS       GT       NG       DFO       PL       WA       8       06/72       55,700       49         BARTOW       P4       PINELLAS       GT       DFO       TK       12/75.04/75       401,220       324         DEBARY       P1-P       VOLUSIA       GT       NG       DFO       TK       12/75.04/75       46000       53         DEBARY       P10       VOLUSIA       GT       NG       DFO       PL       TK       8       10/92       15.000       13         HIGGINS       P1-P2       PINELLAS       GT       NG	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	ab	(12)	(13)	(14)
PLANT NAME         NO.         IGOUNTO         TYPE         PEL ALL         PEL ALL         PEL ALL         Description         MOTELAR         KCW         YW           STEAM         ANCLOTE         1         PASCO         ST         RFO         NO         PL         PL         1074         \$56,200         494           ANCLOTE         2         PASCO         ST         RFO         NO         PL         PL         1074         \$55,200         494           ANCLOTE         1         PRELAS         ST         RFO         WA         04961         127,500         121           BARTOW         2         PINELAS         ST         RFO         WA         04961         127,500         121           BARTOW         3         PINELAS         ST         RFO         WAR         10966         440,500         770           CRVSTAL RIVER         1         CTRUS         ST         BIT         WARR         1094         732,260         710           CRVSTAL RIVER         4         CTRUS         ST         BIT         WARR         10,43         34,500         31           SUWANNEE RIVER         1         SUWANNEE ST         RFO         TK		UNIT	LOCATION	UNIT	F	IFI		ANCOOPT	AT FUEL					
STEAM         ANCLOTE         I         PASCO         ST         RFO         NG         PL         L         L0714         556,200         498           ANCLOTE         2         PASCO         ST         RFO         NG         PL         PL         L0718         556,200         493           BARTOW         1         FINELLAS         ST         RFO         WA         09454         L17,500         110           BARTOW         2         PINELLAS         ST         RFO         WA         PL         07663         229,360         201           CRYSTAL RIVER         1         CITRUS         ST         BIT         WARR         10665         440,50         779,240         720           CRYSTAL RIVER         2         CITRUS         ST         BIT         WARR         1094         739,240         720           CRYSTAL RIVER         4         CITRUS         ST         BIT         WARR         1094         739,240         730         80,40         740           CRYSTAL RIVER         3         SUWANNEE RIVER         1         SUWANNEE RIVER         1         SUWANNEE RIVER         2         SUWANNEE ST         FO         NG         TK	PLANT NAME													
ANCLOTE       1       PASCO       ST       RFO       NG       PL       PL       1074       \$56,200       498         ANCLOTE       2       PASCO       ST       RFO       NG       PL       PL       1075       \$56,200       495         BARTOW       1       PINELLAS       ST       RFO       WA       00%1       177,500       121         BARTOW       2       PINELLAS       ST       RFO       WA       00%1       177,500       123         BARTOW       3       PINELLAS       ST       RFO       WA       00%1       177,500       121         CRYSTAL RIVER       1       CITRUS       ST       BIT       WA.RR       11.690       523,800       466         CRYSTAL RIVER       2       CITRUS       ST       BIT       WA.RR       1282       739,260       770         SUWANNEE RIVER       1       SUWANNEE RIVER       1       SUWANNEE RIVER       3       SUWANNEE RIVER       3       SUWANNEE RIVER       1       90LK       CC       NG       TK       PL       10.55       37,900       31         SUWANNEE RIVER       1       POLK       CC       NG       FK       PL		1.001			1.141		<u>. 104</u>	UPT	<u>PA13 036</u>	MOJICAN	MU/IEAK	<u>K</u> <u>w</u>	<u>MW</u>	<u>MW</u>
ANCLOTE         2         PASCO         ST         RFO         NG         PL         PL         Local		1	PASCO	ST	REO	NG	P1.	PI.		10/74		555 200	100	*
BARTOW         I         PINELLAS         ST         RPO         WA         D0/35         127,500         121           BARTOW         2         PINELAS         ST         RPO         WA         08/61         127,500         121           BARTOW         3         PINELAS         ST         RPO         WA         08/61         127,500         121           BARTOW         3         PINELAS         ST         RPO         WA         08/61         127,500         121           CRVSTAL RIVER         1         CITRUS         ST         BUC         TK         07/63         239,360         120           CRVSTAL RIVER         2         CITRUS         ST         BUC         TK         01/77         390,460         32           SUWANNEE RIVER         1         SUWANNEE ST         BTO         NG         TK         11/33         34,500         32           SUWANNEE RIVER         2         SUWANNEE ST         RFO         TK         11/44         37,500         31           SUWANNEE RIVER         3         SUWANNEE ST         RFO         TK         11/24         37,500         362           SUWANNEE RIVER         1         POLK														522
BARTOW         2         PINELLAS         ST         RFO         WA         BORS         127.500         111           BARTOW         3         PINELLAS         ST         RFO         NG         WA         PI         0763         239.56         204           CRVSTAL RIVER         1         CITKUS         ST         BIT         WA.RR         11/69         523.60         446           CRVSTAL RIVER         2         CITRUS         ST         BIT         WA.RR         11/69         523.60         446           CRVSTAL RIVER         4         CITRUS         ST         BIT         WA.RR         10/24         739.260         720           CRVSTAL RIVER         5         CITRUS         ST         BIT         WA.RR         10/24         739.260         730.00         32           SUWANNEE RIVER         1         SUWANNEE ST         RFO         NG         TK         PL         10/24         735.00         32           SUWANNEE RIVER         3         SUWANNEE RIVER         3         SUWANNEE RIVER         4         SUMANNEE RIVER         4.51         10/24         730.00         46           COMENCYCE         1         POLK         CC         <														522
BARTOW         J         PINELLAS         ST         REO         NG         WA         PI.         COMPS         1233-36         204           CRYSTAL RIVER         1         CITRUS         ST         BIT         WA.RR         10966         440.550         379           CRYSTAL RIVER         2         CITRUS         ST         BIT         WA.RR         10964         440.550         470           CRYSTAL RIVER         3         CITRUS         ST         BIT         WA.RR         10944         739.260         720           CRYSTAL RIVER         4         CITRUS         ST         BIT         WA.RR         10944         739.260         720           SUWANNEE RIVER         1         SUWANNEE ST         RFO         NG         TK         PI         11/34         34.500         32           SUWANNEE RIVER         3         SUWANNEE ST         RFO         NG         TK         PI         10/35         730.00         31           SUWANNEE RIVER         3         SUWANNEE ST         RFO         NG         TK         PL         10/35         946.550         442           MINES ENREGY COMPLEX         1         POLK         CC         NG <t< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>123</td></t<>														123
CRYSTAL RIVER       1       CITRUS       ST       BIT       WA,R       1066       440,500       379         CRYSTAL RIVER       2       CITRUS       ST       BIT       WA,RR       11/69       533,800       446         CRYSTAL RIVER       3       CITRUS       ST       BIT       WA,RR       10/66       440,500       379         CRYSTAL RIVER       4       CITRUS       ST       BIT       WA,RR       10/81       739,260       720         CRYSTAL RIVER       5       CITRUS       ST       BIT       WA,RR       10/81       739,260       732         SUWANNEE RIVER       1       SUWANNEE ST       RFO       NG       TK       11/51       34,500       31         SUWANNEE RIVER       2       SUWANNEE ST       RFO       NG       TK       PL       10/65       7300       80         MINES ENERGY COMPLEX       1       POLK       CC       NG       DFO       PL       TK       6       04/99       546,550       442         HINES ENERGY COMPLEX       1       POLK       CC       NG       DFO       PL       TK       6       12/68       33,390       26         AVON PARK								PI						121
CRYSTAL RIVER         2         CITRUS         ST         BIT         WARR         11/69         513.00         489           CRYSTAL RIVER         3         CITRUS         ST         NUC         TK         0.077         590.460         769           CRYSTAL RIVER         4         CITRUS         ST         NUC         TK         0.077         590.460         779           CRYSTAL RIVER         5         CITRUS         ST         BIT         WARR         1094         739.260         717           SUWANNEE RIVER         1         SUWANNEE ST         RFO         TK         11.169         545.50         32           SUWANNEE RIVER         3         SUWANNEE ST         RFO         TK         PL         10055         75.000         80           TOMENDE-CYCLE         1         POLK         CC         NG         PL         TK         6         0.499         546.550         442           HINES ENERGY COMPLEX         1         POLK         CC         NG         PL         TK         6         0.499         546.550         442           HINES ENERGY COMPLEX         1         POLK         CC         NG         PL         TK         5	CRYSTAL RIVER							•••						208
CRYSTAL RIVER       3 *       CITRUS       ST       NUC       TK       100777       890.400       769         CRYSTAL RVER       4       CITRUS       ST       BIT       WA.RR       1282       739.260       710         CRYSTAL RVER       5       CITRUS       ST       BIT       WA.RR       1094       739.260       717         SUWANNEE RIVER       1       SUWANNEE       ST       RFO       NG       TK       PI       11/53       34.500       32         SUWANNEE RIVER       2       SUWANNEE       ST       RFO       NG       TK       PI       11/53       34.500       33         SUMANNEE RIVER       2       SUWANNEE       ST       RFO       NG       TK       PL       1055       75.000       80         SUMANNEE RIVER       1       POLK       CC       NG       DFO       PL       TK       6       04/99       546.550       482         HINES ENERGY COMPLEX       1       POLK       CC       NG       DFO       PL       TK       6       04/99       546.550       482         AVON PARK       P1       HICHLANDS       GT       NG       DFO       PL       TK		2												383
CRYSTAL RIVER       4       CTRUS       ST       DT       WA.R       10/22       739.260       720         CRYSTAL RIVER       5       CTRUS       ST       BT       WA.RR       10/94       739.260       720         CRYSTAL RIVER       5       CTRUS       ST       BT       WA.RR       10/94       739.260       720         SUWANNEE RIVER       1       SUWANNEE ST       RFO       NG       TK       11/153       34.500       31         SUWANNEE RIVER       2       SUWANNEE ST       RFO       TK       11/95       75.000       &       &         SUMANNEE RIVER       3       SUWANNEE ST       RFO       TK       PL       10/95       75.000       &       &         SUMANNEE RIVER       3       SUWANNEE ST       RFO       TK       PL       10/95       75.000       &														491
CRYSTAL RIVER       5       CTRUS       ST       BIT       WARR       1094       793,200       717         SUWANNEE RIVER       1       SUWANNEE       ST       RFO       NG       TK       PI       11/53       34,500       32         SUWANNEE RIVER       2       SUWANNEE       ST       RFO       NG       TK       PI       10944       73,200       717         SUWANNEE RIVER       2       SUWANNEE       ST       RFO       NG       TK       PL       11/53       34,500       32         SUWANNEE RIVER       3       SUWANNEE RIVER       3       SUWANNEE RIVER       4.631       75000       80         ORIBINED-CYCLE       HINES ENERGY COMPLEX       1       POLK       CC       NG       DFO       PL       TK       6       12/03       598,000       516         AVON PARK       P1       HIGHLANDS       GT       DFO       PL       TK       3       12/68       33,790       26         AVON PARK       P2       HIGHLANDS       GT       DFO       PL       TK       3       12/68       33,790       26         ARTOW       PL.P3       PINELLAS       GT       DFO       PLW		4												788
SUWANNEE RIVER       1       SUWANNEE ST       RFO       NG       TK       PI       11/53       33,500       32         SUWANNEE RIVER       2       SUWANNEE ST       RFO       TK       11/54       37,500       30         SUWANNEE RIVER       3       SUWANNEE ST       RFO       NG       TK       PL       10/55       75,000       30         SUWANNEE RIVER       3       SUWANNEE ST       RFO       NG       TK       PL       10/55       4621         OMBINED-CYCLE       HINES ENERGY COMPLEX       1       POLK       CC       NG       DFO       PL       TK       6       10/99       546,550       482         HINES ENERGY COMPLEX       2       POLK       CC       NG       DFO       PL       TK       6       10/93       33,790       26         AVON PARK       P1       HIGHLANDS       GT       NG       DFO       TK       11/68       30,790       26         BARTOW       P1, P3       PINELLAS       GT       DFO       TK       11/63       33,790       26         BARTOW       P1, P3       PINELLAS       GT       DFO       TK       11/263       33,790       26														735
SUWANNEE RIVER       2       SUWANNEE ST       RFO       TK       11/54       37,500       31         SUWANNEE RIVER       3       SUWANNEE ST       RFO       TK       PL       10/55       75,000       30         SUWANNEE RIVER       3       SUWANNEE ST       RFO       NK       PL       10/55       75,000       30         SUMANNEE RIVER       1       POLK       CC       NG       DFO       PL       TK       6       04/99       546,550       482         HINES ENERGY COMPLEX       1       POLK       CC       NG       DFO       PL       TK       6       04/99       546,550       482         HINES ENERGY COMPLEX       1       POLK       CC       NG       DFO       PL       TK       10/05       750,00       50       516         AVON PARK       P1       HIGHLANDS       GT       NG       DFO       TK       11/268       33,790       26         AVON PARK       P2       PINELLAS       GT       NG       DFO       TK       11/268       33,790       26         BARTOW       P1.P3       PINELLAS       GT       NG       DFO       WA       8       06/72       55						NG		DI						732
SUWANNER RIVER       3       SUWANNER       ST       RFO       NG       TK       PL       10056       75.000       80         COMBINED-CYCLE       I       POLK       CC       NG       DFO       PL       TK       6       04/99       546,550       482         HINES ENERGY COMPLEX       1       POLK       CC       NG       DFO       PL       TK       6       04/99       546,550       482         HINES ENERGY COMPLEX       2       POLK       CC       NG       DFO       PL       TK       6       12/03       598,000       516         TIGER BAY       1       POLK       CC       NG       DFO       PL       TK       6       12/03       598,000       516         AVON PARK       P1       HIGHLANDS       GT       NG       DFO       TK       12/68       33,790       26         BARTOW       P1,P3       PINELLAS       GT       NG       DFO       TK       12/268       33,790       26         BARTOW       P2       PINELLAS       GT       NG       DFO       PL       WA       8       06/72       55,700       49         SAYBORO       P1.P4														33
COMBINED-CYCLE         HIGH AND R NG KG KG         HIGH AND R KG         KG<						NG		Dĭ						32
DMBMEDCYCLE         I         POLK         CC         NG         DFO         PL         TK         6         0.4/99         546.550         482           HINES ENERGY COMPLEX         1         POLK         CC         NG         DFO         PL         TK         6         1/203         598.000         516           HINES ENERGY COMPLEX         1         POLK         CC         NG         PL         TK         6         1/203         598.000         516           HINES ENERGY COMPLEX         1         POLK         CC         NG         PL         TK         6         1/203         598.000         516           OBBUSTION TURBINE         T         POLK         CC         NG         DFO         PL         TK         1/268         33.790         26           AVON PARK         P1         HICHLANDS         GT         NG         DFO         PL         TK         1/268         33.790         26           BARTOW         P1.2         HIGHLANDS         GT         NG         DFO         PL         KA         8         06/72         55,700         49           BARTOW         P1.4         PINELLAS         GT         NG         DFO			000000000	51	NI O		12	r L		10420		75.000		81
HINES ENERGY COMPLEX       1       POLK       CC       NG       DFO       PL       TK       6       0.4/99       546.550       482         HINES ENERGY COMPLEX       2       POLK       CC       NG       DFO       PL       TK       6       12/03       598.000       516         TIGER BAY       1       POLK       CC       NG       PL       TK       6       12/03       278.223       2021         COMBUNTION TURBINE        VON PARK       P1       HICHLANDS       GT       NG       DFO       TK       3       12/68       33.790       26         AVON PARK       P1       HICHLANDS       GT       NG       DFO       WA       5772-672       111.400       92         BARTOW       P1.2       PINELLAS       GT       NG       DFO       VA       8       06772       55.700       49         BARTOW       P1-4       PINELLAS       GT       NG       DFO       TK       1275.4476       401.220       33.4         DEBARY       P1-P4       PINELLAS       GT       NG       DFO       TK       1275.4476       401.220       34.4         DEBARY       P1-P5       VOLUSIA <td>OMBINED-CYCLE</td> <td></td> <td>4,651</td> <td>4,771</td>	OMBINED-CYCLE												4,651	4,771
HINES ENERGY COMPLEX       2       POLK       CC       NG       DFO       PL       TK       6       1203       598,000       516         TIGER BAY       I       POLK       CC       NG       PL       08/97       278,223       201         IDMBUSTION TURBINE       IDMA       S       DEV       08/97       278,223       201         AVON PARK       P1       HIGHLANDS       GT       NG       DFO       TK       12/68       33,790       26         AVON PARK       P2       HIGHLANDS       GT       DFO       TK       12/68       33,790       26         BARTOW       P1.9       PINELLAS       GT       DFO       TK       12/68       33,790       26         BARTOW       P4       PINELLAS       GT       NG       DFO       PL       WA       8       06/72       55,700       49         BANTOW       P4       PINELLAS       GT       DFO       TK       12/75-04/76       401,220       324         DEBARY       P1-P6       VOLUSIA       GT       DFO       TK       10/92       115.000       85         HIGGINS       P1-P2       PINELLAS       GT       NG		ł	POLK	CC	NG	DE0	זס	τv	6	04/0/)				
TIGER BAY       I       POLK       CC       NG       PL       DB       DE       DB														529
CMBUSTION TURBINE         NG         NG         NG         PR         NG         PR         NG         PR         NG         NG         PR         NG         NG         PR         NG         NG         NG         PR         NG         NG         DFO         TK         3         12/68         33.790         26           AVON PARK         P2         HIGHLANDS         GT         DFO         TK         12/68         33.790         26           BARTOW         P1, P3         PINELLAS         GT         DFO         WA         5/72-6/72         111,400         92           BARTOW         P2         PINELLAS         GT         NG         DFO         PL         WA         8         06/72         55,700         49           BAYBORO         P1-P4         PINELLAS         GT         DFO         VK.         04/73         226,800         184           DEBARY         P1-P6         VOLUSIA         GT         DFO         TK         10/92         345,000         258           DEBARY         P1-9         VOLUSIA         GT         DFO         PL         TK         03/69-04/69         67,550         54           HIGGINS         P1-P2						010			ŭ					582
OMBUSTION TURBINE         AVON PARK       P1       HIGHLANDS       GT       NG       DFO       TK       3       12/68       33.790       26         AVON PARK       P2       HIGHLANDS       GT       DFO       TK       12/68       33.790       26         BARTOW       P1, P3       PINELLAS       GT       DFO       WA       5/72-6/72       111,400       92         BARTOW       P2       PINELLAS       GT       NG       DFO       PL       WA       8       06/72       55,700       46         BARTOW       P4       PINELLAS       GT       NG       DFO       PL       WA       8       06/72       55,700       49         BAYBORO       P1-4       PINELLAS       GT       DFO       WA.TK       04/73       226,800       184         DEBARY       P1-P6       VOLUSIA       GT       DFO       TK       12/75.04/76       401,220       355         DEBARY       P1-P7       VOLUSIA       GT       DFO       PL       TK       8       10/92       115.000       83         DEBARY       P1-9       VOLUSIA       GT       NG       DFO       PL       TK       1		•		<u> </u>						06/97		278.223	-	<u>223</u>
AVON PARK       P2       HIGHLANDS       GT       DF0       TK       12/36       33,790       26         BARTOW       P1, P3       PINELLAS       GT       DF0       WA       5/72-6/72       111,400       92         BARTOW       P2       PINELLAS       GT       NG       DF0       PL       WA       8       06/72       55,700       46         BARTOW       P4       PINELLAS       GT       NG       DF0       PL       WA       8       06/72       55,700       46         BARTOW       P4       PINELLAS       GT       NG       DF0       PL       WA       8       06/72       55,700       46         BARTOW       P1+P4       PINELLAS       GT       DF0       TK       12/25-04/75       401,220       324         DEBARY       P1-P6       VOLUSIA       GT       DF0       TK       12/27-04/72       115.000       85         HIGGINS       P1-P2       PINELLAS       GT       NG       DF0       PL       TK       10/92       115.000       85         INTERCESSION CITY       P1-P6       OSCEOLA       GT       NG       DF0       PL       TK       10/90       4	OMBUSTION TURBINE												1,205	1,334
AVON PARK       P2       HIGHLANDS       GT       DFO       TK       12/68       33.790       26         BARTOW       P1, P3       PINELLAS       GT       DFO       WA       \$772-6/72       111,400       92         BARTOW       P2       PINELLAS       GT       NG       DFO       PL       WA       8       06/72       55,700       46         BARTOW       P4       PINELLAS       GT       NG       DFO       PL       WA       8       06/72       55,700       46         BARTOW       P4       PINELLAS       GT       NG       DFO       PL       WA       8       06/72       55,700       46         BARTOW       P1       P4       PINELLAS       GT       NG       DFO       VA       8       06/72       35,700       46         DEBARY       P1.P6       VOLUSIA       GT       DFO       WA       K       12/75.04/75       401,220       324         DEBARY       P1.0       VOLUSIA       GT       NG       DFO       PL       TK       10/92       115.000       85       54         HIGGINS       P1-P2       PINELLAS       GT       NG       DFO	AVON PARK	PI	HIGHLANDS	GT	NG	DFO	PL	тк	3	17/68		33 700	26	32
BARTOW         PI, P3         PINELLAS         GT         DFO         WA         572-672         111,400         92           BARTOW         P2         PINELLAS         GT         NG         DFO         PL         WA         8         06/72         55,700         46           BARTOW         P4         PINELLAS         GT         NG         DFO         PL         WA         8         06/72         55,700         49           BARTOW         P4         PINELLAS         GT         NG         DFO         WA         8         06/72         55,700         49           BAYBORO         P1-P4         PINELLAS         GT         NG         DFO         WA.TK         04/73         226,800         184           DEBARY         P1-P5         VOLUSIA         GT         NG         DFO         TK         10/92         345.000         258           DEBARY         P10         VOLUSIA         GT         DFO         TK         10/92         115.000         85           HIGGINS         P1-P2         PINELLAS         GT         NG         DFO         PL         TK         10/92         13           INTERCESSION CITY         P1-P6	AVON PARK	P2	HIGHLANDS	GT	DFO				-					32
BARTOW         P2         PINELLAS         GT         NG         DFO         PL         WA         8         06/72         55,700         46           BARTOW         P4         PINELLAS         GT         NG         DFO         PL         WA         8         06/72         55,700         49           BAYBORO         PI-P4         PINELLAS         GT         DFO         WA,TK         04/73         226,800         184           DEBARY         PI-P6         VOLUSIA         GT         DFO         TK         12/75-04/76         401,220         324           DEBARY         P1-P2         VOLUSIA         GT         NG         DFO         TK         10/92         115.000         85           DEBARY         P10         VOLUSIA         GT         NG         DFO         PL         TK         8         10/92         115.000         85           HIGGINS         P1-P2         PINELLAS         GT         NG         DFO         PL         TK         1         12/70-01/71         85.850         64           INTERCESSION CITY         P1-P6         OSCEOLA         GT         NG         DFO         PL.TK         01/97         165.000	BARTOW	P1, P3	PINELLAS	GT	DFO									34 106
BARTOW         P4         PINELLAS         GT         NG         DFO         PL         WA         8         0.6772         55,700         49           BAYBORO         PI-P4         PINELLAS         GT         DFO         WA.TK         0.4/73         226,800         184           DEBARY         PI-P6         VOLUSIA         GT         DFO         TK         12/75-04/76         401,220         324           DEBARY         PI-P6         VOLUSIA         GT         NG         DFO         TK         12/75-04/76         401,220         324           DEBARY         PI-P9         VOLUSIA         GT         NG         DFO         PL         TK         8         10/92         115.000         85           DEBARY         PI0         VOLUSIA         GT         NG         DFO         PL         TK         10/92         115.000         85           HIGGINS         PI-P2         PINELLAS         GT         NG         DFO         PL         TK         11/70-01/71         85,830         68           INTERCESSION CITY         PI-P6         OSCEOLA         GT         NG         DFO         PL.TK         51/0433         460,000         352      <	BARTOW	P2	PINELLAS	GT	NG	DFO		WA	8					53
BAYBORO       PI-P4       PINELLAS       GT       DFO       WA.TK       04/73       226,800       184         DEBARY       PI-P6       VOLUSIA       GT       DFO       TK       12/75-04/76       401,220       324         DEBARY       P7-P9       VOLUSIA       GT       NG       DFO       TK       12/75-04/76       401,220       324         DEBARY       P1-P9       VOLUSIA       GT       NG       DFO       TK       10/92       115.000       85         DEBARY       P10       VOLUSIA       GT       NG       DFO       TK       10/92       115.000       85         HIGGINS       P1-P2       PINELLAS       GT       NG       DFO       PL       TK       03/69-04/59       67.580       54         INTERCESSION CITY       P1-P6       OSCEOLA       GT       NG       DFO       PL       TK       1       12/70-01/71       85.350       68         INTERCESSION CITY       P1-P6       OSCEOLA       GT       NG       DFO       PL       TK       1       10/93       460,000       352         INTERCESSION CITY       P1-14       SCEOLA       GT       NG       DFO       PL       N	BARTOW	P4	PINELLAS	GT	NG	DFO								60
DEBARY         P1-P6         VOLUSIA         GT         DFO         TK         1277-54/76         401,220         324           DEBARY         P7-P9         VOLUSIA         GT         NG         DFO         TK         1277-54/76         401,220         324           DEBARY         P1-P9         VOLUSIA         GT         NG         DFO         PL         TK         8         10/92         115.000         85           DEBARY         P10         VOLUSIA         GT         NG         DFO         TK         10/92         115.000         85           HIGGINS         P1-P2         PINELLAS         GT         NG         DFO         PL         TK         03/69-04/69         67.580         54           HIGGINS         P3-P4         PINELLAS         GT         NG         DFO         PL         TK         1         12/70-01/71         85.850         68           INTERCESSION CITY         P1-P6         OSCEOLA         GT         DFO         PL         TK         05/74         340.000         352           INTERCESSION CITY         P14         SCEOLA         GT         DFO         PL TK         5         10/93         460,000         352	BAYBORO	PI-P4	PINELLAS	GT	DFO		WA.TK		-					232
DEBARY       P7-P9       VOLUSIA       GT       NG       DFO       PL       TK       8       10/92       345.000       258         DEBARY       P10       VOLUSIA       GT       DFO       TK       10/92       115.000       85         HIGGINS       P1-P2       PINELLAS       GT       NG       DFO       PL       TK       03/69-04/69       67.580       54         HIGGINS       P3-P4       PINELLAS       GT       NG       DFO       PL       TK       1       12/70-01/71       85,850       68         INTERCESSION CITY       P1-P6       OSCEOLA       GT       DFO       PL       TK       1       12/70-01/71       85,850       68         INTERCESSION CITY       P1-P6       OSCEOLA       GT       DFO       PL       TK       1       12/70-01/71       85,850       68         INTERCESSION CITY       P1-P6       OSCEOLA       GT       DFO       PL       TK       05/74       340.200       294         INTERCESSION CITY       P1+**       OSCEOLA       GT       DFO       PL       TK       01/97       165,000       143         INTERCESSION CITY       P12-P14       OSCEOLA       GT<	DEBARY	P1-P6	VOLUSIA	GT	DFO									390
DEBARY         P10         VOLUSIA         GT         DFO         TK         10/92         115.000         85           HIGGINS         P1-P2         PINELLAS         GT         NG         DFO         PL         TK         03/69-04/69         67.580         54           HIGGINS         P3-P4         PINELLAS         GT         NG         DFO         PL         TK         1         12/70-01/71         85.850         68           INTERCESSION CITY         P1-P6         OSCEOLA         GT         NG         DFO         PL.TK         05/74         340.200         294           INTERCESSION CITY         P1-P6         OSCEOLA         GT         NG         DFO         PL.TK         01/97         165,000         143           INTERCESSION CITY         P11 **         OSCEOLA         GT         NG         DFO         PL         TK         01/97         165,000         143           INTERCESSION CITY         P11 **         OSCEOLA         GT         NG         DFO         PL         TK         01/97         165,000         143           INTERCESSION CITY         P12-P14         OSCEOLA         GT         NG         DFO         PL         TK         01/960 <td>DEBARY</td> <td>P7-P9</td> <td>VOLUSIA</td> <td>GT</td> <td>NG</td> <td>DFO</td> <td>PL</td> <td>тк</td> <td>8</td> <td></td> <td></td> <td></td> <td></td> <td>279</td>	DEBARY	P7-P9	VOLUSIA	GT	NG	DFO	PL	тк	8					279
HIGGINS       P1-P2       PINELLAS       GT       NG       DFO       PL       TK       03/69-04/69       67,580       54         HIGGINS       P3-P4       PINELLAS       GT       NG       DFO       PL       TK       1       12/70-01/71       85,830       68         INTERCESSION CITY       P1-P6       OSCEOLA       GT       DFO       PL.TK       05/74       340,200       294         INTERCESSION CITY       P1-P6       OSCEOLA       GT       NG       DFO       PL.TK       5       10/93       460,000       352         INTERCESSION CITY       P1-P4       OSCEOLA       GT       NG       DFO       PL.TK       5       10/93       460,000       352         INTERCESSION CITY       P1-P4       OSCEOLA       GT       NG       DFO       PL.TK       5       10/93       460,000       352         INTERCESSION CITY       P1-P1       SCEOLA       GT       NG       DFO       PL.TK       5       12/00       345,000       252         RIO PINAR       P1       ORANGE       GT       NG       DFO       TK       10/93       61,200       55         SUWANNEE RIVER       P1       SUWANNEE	DEBARY	P10	VOLUSIA	GT	DFO									93
HIGGINS       P3-P4       PINELLAS       GT       NG       DFO       PL       TK       I       12/70-01/71       85,850       68         INTERCESSION CITY       P1-P6       OSCEOLA       GT       DFO       PL,TK       05/74       340,200       294         INTERCESSION CITY       P7-P10       OSCEOLA       GT       DFO       PL,TK       5       10/93       460,000       352         INTERCESSION CITY       P1 #*       OSCEOLA       GT       DFO       PL       PL,TK       5       10/93       460,000       352         INTERCESSION CITY       P1 #*       OSCEOLA       GT       DFO       PL       PL,TK       5       10/93       460,000       352         INTERCESSION CITY       P1 #*       OSCEOLA       GT       DFO       PL       PL,TK       5       12/00       345,000       252         RIO PINAR       P1       ORANGE       GT       DFO       TK       11/70       19,290       13         SUWANNEE RIVER       P1       SUWANNEE       GT       DFO       TK       10/80       61,200       55         SUWANNEE RIVER       P3       SUWANNEE       GT       DFO       TK       10/70	HIGGINS	P1-P2	PINELLAS	GT	NG	DFO	PL	тк						53 64
INTERCESSION CITY       P1-P6       OSCEOLA       GT       DFO       PL,TK       05/74       340.200       294         INTERCESSION CITY       P7-P10       OSCEOLA       GT       NG       DFO       PL       PL,TK       5       10/93       460,000       352         INTERCESSION CITY       P1       **       OSCEOLA       GT       DFO       PL       PL,TK       5       10/93       460,000       352         INTERCESSION CITY       P1       **       OSCEOLA       GT       DFO       PL       PL,TK       5       10/93       460,000       352         INTERCESSION CITY       P1       **       OSCEOLA       GT       DFO       PL       PL,TK       5       10/93       460,000       352         INTERCESSION CITY       P1       **       OSCEOLA       GT       DFO       PL       PL,TK       5       12/00       345,000       252         RIO PINAR       P1       ORANGE       GT       DFO       TK       11/70       19,290       13         SUWANNEE RIVER       P1       SUWANNEE       GT       DFO       TK       10/80       61,200       55         SUWANNEE RIVER       P3       SUWA	HIGGINS	P3-P4	PINELLAS	GT	NG	DFO			I.					70
INTERCESSION CITY       P7-P10       OSCEOLA       GT       NG       DF0       PL       PL.TK       5       10/93       460,000       352         INTERCESSION CITY       P11 **       OSCEOLA       GT       DF0       PL.TK       01/97       165,000       143         INTERCESSION CITY       P12-P14       OSCEOLA       GT       NG       DF0       PL       PL.TK       5       12/00       345,000       252         RIO PINAR       P1       ORANGE       GT       NG       DF0       PL       PL.TK       5       12/00       345,000       252         SUWANNEE RIVER       P1       ORANGE       GT       DF0       PL       TK       10/80       61,200       55         SUWANNEE RIVER       P2       SUWANNEE       GT       DF0       TK       10/80       61,200       55         SUWANNEE RIVER       P3       SUWANNEE       GT       DF0       TK       10/70       38,580       26         TURNER       P1       VOLUSIA       GT       DF0       TK       08/74       71,200       65         TURNER       P4       VOLUSIA       GT       DF0       TK       08/74       71,200	INTERCESSION CITY	P1-P6	OSCEOLA	GT	DFO									366
INTERCESSION CITY       P11 **       OSCEOLA       GT       DFO       PL.TK       01/97       165,000       143         INTERCESSION CITY       P12-P14       OSCEOLA       GT       NG       DFO       PL       NG       01/97       165,000       143         INTERCESSION CITY       P12-P14       OSCEOLA       GT       NG       DFO       PL       NL       01/97       165,000       143         RIO PINAR       P1       ORANGE       GT       NG       DFO       PL       TK       11/70       19,290       13         SUWANNEE RIVER       P1       SUWANNEE       GT       NG       DFO       PL       TK       10       10/80       61,200       55         SUWANNEE RIVER       P2       SUWANNEE       GT       DFO       TK       10/80       61,200       55         SUWANNEE RIVER       P3       SUWANNEE       GT       DFO       TK       10/80       61,200       55         SUWANNEE RIVER       P1-P2       VOLUSIA       GT       DFO       TK       10/70       38,580       26         TURNER       P1-P2       VOLUSIA       GT       DFO       TK       08/74       71,200       65	INTERCESSION CITY	P7-P10	OSCEOLA	GL	NG	DFO		PL.TK	5					
INTERCESSION CITY       P12-P14       OSCEOLA       GT       NG       DFO       PL       NG       DFO       100,000       14.3         RIO PINAR       P1       ORANGE       GT       DFO       PL       PLTK       5       12/00       345.000       252         SUWANNEE RIVER       P1       SUWANNEE       GT       DFO       TK       11/70       19.290       13         SUWANNEE RIVER       P1       SUWANNEE       GT       NG       DFO       PL       TK       10       10/80       61.200       55         SUWANNEE RIVER       P2       SUWANNEE       GT       DFO       TK       10/80       61.200       55         SUWANNEE RIVER       P3       SUWANNEE       GT       DFO       TK       10/80       61.200       55         TURNER       P1-P2       VOLUSIA       GT       DFO       TK       10/70       38.580       26         TURNER       P3       VOLUSIA       GT       DFO       TK       08/74       71.200       65         TURNER       P4       VOLUSIA       GT       DFO       TK       08/74       71.200       63         UNIV. OF FLA.       P1 <td< td=""><td>INTERCESSION CITY</td><td>P!! **</td><td></td><td>GT</td><td>DFO</td><td></td><td></td><td></td><td>5</td><td></td><td></td><td></td><td></td><td>376</td></td<>	INTERCESSION CITY	P!! **		GT	DFO				5					376
RIO PINAR       P1       ORANGE       GT       DFO       TK       11/70       19,290       13         SUWANNEE RIVER       P1       SUWANNEE       GT       NG       DFO       TK       10/80       61.200       55         SUWANNEE RIVER       P2       SUWANNEE       GT       DFO       TK       10/80       61.200       54         SUWANNEE RIVER       P2       SUWANNEE       GT       DFO       TK       10/80       61.200       55         SUWANNEE RIVER       P3       SUWANNEE       GT       DFO       TK       10/70       38.580       26         TURNER       P3       VOLUSIA       GT       DFO       TK       08/74       71.200       65         TURNER       P4       VOLUSIA       GT       DFO       TK       08/74       71.200       63         UNIV. OF FLA.       P1       ALACHUA       GT       NG       PL       01/94       43.000       35         2.619       3	INTERCESSION CITY	P12-P14				DFO		PI TK	٩					170
SUWANNEE RIVER       P1       SUWANNEE       GT       NG       DFO       PL       TK       10       10/80       61.200       55         SUWANNEE RIVER       P2       SUWANNEE       GT       DFO       TK       10/80       61.200       54         SUWANNEE RIVER       P3       SUWANNEE       GT       DFO       TK       10/80       61.200       55         SUWANNEE RIVER       P3       SUWANNEE       GT       NG       DFO       PL       TK       10       11/80       61.200       55         TURNER       P3       SUWANNEE       GT       DFO       TK       10/70       38.580       26         TURNER       P3       VOLUSIA       GT       DFO       TK       08/74       71.200       65         TURNER       P4       VOLUSIA       GT       DFO       TK       08/74       71.200       63         UNIV. OF FLA.       P1       ALACHUA       GT       NG       PL       01/94       43.000       35         ZAGI9       3       SUNANCE       SUNANCE       SUNANCE       SUNANCE       SUNANCE       35	RIO PINAR	P1	ORANGE						.,					294
SUWANNEE RIVER         P2         SUWANNEE         GT         DFO         TK         10/80         61/200         53           SUWANNEE RIVER         P3         SUWANNEE         GT         NG         DFO         TK         10/80         61/200         54           SUWANNEE RIVER         P3         SUWANNEE         GT         NG         DFO         PL         TK         10         11/80         61/200         55           TURNER         P1-P2         VOLUSIA         GT         DFO         TK         10/70         38.580         26           TURNER         P3         VOLUSIA         GT         DFO         TK         08/74         71.200         65           TURNER         P4         VOLUSIA         GT         DFO         TK         08/74         71.200         63           UNIV. OF FLA.         P1         ALACHUA         GT         NG         PL         01/94         43.000         35           2,619         3         S         S         S         S         S	SUWANNÉE RIVER		SUWANNEE			DFD		ТК	10					16
SUWANNEE RIVER         P3         SUWANNEE         GT         NG         DFO         TK         10         11/80         61,200         55           TURNER         P1-P2         VOLUSIA         GT         DFO         TK         10/70         38,580         26           TURNER         P3         VOLUSIA         GT         DFO         TK         08/74         71,200         65           TURNER         P4         VOLUSIA         GT         DFO         TK         08/74         71,200         63           UNIV. OF FLA.         P1         ALACHUA         GT         NG         PL         01/94         43,000         35           2,619         3         3         35         36         36         36									10					67
TURNER         PI-P2         VOLUSIA         GT         DFO         TK         10/70         38,580         26           TURNER         P3         VOLUSIA         GT         DFO         TK         08/74         71,200         65           TURNER         P4         VOLUSIA         GT         DFO         TK         08/74         71,200         63           UNIV. OF FLA.         P1         ALACHUA         GT         NG         PL         01/94         43,000         35           2,619         3         3         35         35         35	SUWANNEE RIVER					DEO		тк	10					67
TURNER         P3         VOLUSIA         GT         DFO         TK         08/74         71,200         65           TURNER         P4         VOLUSIA         GT         DFO         TK         08/74         71,200         63           UNIV. OF FLA.         P1         ALACHUA         GT         NG         PL         01/94         43,000         35           2,619         3         3         3         3         3         3						0.0		1A	10					67
TURNER         P4         VOLUSIA         GT         DFO         TK         08/74         71,200         63           UNIV. OF FLA.         P1         ALACHUA         GT         NG         PL         01/94         43,000         35           2,619         3         2         2         3         3         3														32
UNIV. OF FLA. PI ALACHUA GT NG PL 01/94 43.000 <u>35</u> 2,619 3														82
<b>2.6</b> 19 <b>3</b>														80
2,619 3	***	• 1		<b>N</b> 1			FL			01/94		43.000		<u>41</u>
REPRESENTS APPROXIMATELY 91.8% PEF OWNERSHIP OF UNIT	DEDDESENTS ADDONYMATE	V 01 900 1	DEE ANAIGHEU	IDOCI	IN THE								2,619	3,0 <b>69</b>

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#### SCHEDULE 2.1 HISTORY AND FORECAST OF ENERGY CONSUMPTION AND NUMBER OF CUSTOMERS BY CUSTOMER CLASS

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
		RURAL		COMMERCIAL				
YEAR	PEF POPULATION	MEMBERS PER HOUSEHOLD	GWh	AVERAGE NO. OF CUSTOMERS	AVERAGE KWh CONSUMPTION PER CUSTOMER	GWh	AVERAGE NO. OF CUSTOMERS	AVERAGE KWh CONSUMPTION PER CUSTOMER
1995	2,801,105	2.491	14,938	1,124,679	13,282	8.612	126,189	68,247
1996	2,847,802	2.494	15,481	1,141,671	13,560	8,848	129,440	68,356
1997	2,895,266	2.495	15,080	1,160,611	12,993	9,257	132,504	69,862
1998	2,959,509	2.502	16,526	1,182,786	13,972	9,999	136,345	73,336
1999	3,047,293	2.511	16,245	1,213,470	13,387	10,327	140.897	73,295
2000	3,044,449	2.467	17,116	1,234,286	13,867	10,813	143,475	75,368
2001	3,141,867	2.465	17,604	1,274,672	13,810	11,061	146,983	75,251
2002	3,207,661	2.465	18,754	1,301,515	14,409	11,420	150,577	75.842
2003	3,286,782	2.468	19,429	1,331,914	14,587	11,553	154,294	74,876
2004	3,348,630	2.454	19,347	1,364,677	14,177	11,734	158,780	73,898
2005	3,397,566	2,449	20,069	1,387,564	14,464	12.521	161.148	77,701
2006	3,457,712	2.447	20,602	1,412,969	14,581	12,998	164,319	79,101
2007	3,517,107	2.445	21,139	1,438,524	14,695	13,440	167,509	80,235
2008	3,581,336	2.446	21,669	1,463,871	14,803	13,861	170,672	81,212
2009	3,645,405	2.448	22,201	1,489,119	14,909	14,296	173,820	82,244
2010	3,702,998	2.446	22,742	1,514,200	15,019	14,736	176,945	83,281
2011	3,757,423	2.441	23,288	1,539,080	15,131	15,196	180,043	84,404
2012	3,809,526	2.436	23,837	1,563,793	15,243	15,663	183,119	
2013	3,853,021	2.426	24,394	1,588,391	15,358	16,135	186,180	86,662
2014	3,891,403	2.413	24,959	1,612,925	15,475	16.613	189,232	87,790

#### SCHEDULE 2.2 HISTORY AND FORECAST OF ENERGY CONSUMPTION AND NUMBER OF CUSTOMERS BY CUSTOMER CLASS

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
		INDUSTR	IAL				
YEAR	GWh	AVERAGE NO. OF CUSTOMERS	AVERAGE KWh CONSUMPTION PER CUSTOMER	RAILROADS AND RAILWAYS GWb	STREET & HIGHWAY LIGHTING GWh	OTHER SALES TO PUBLIC AUTHORITIES GWh	TOTAL SALES TO ULTIMATE CONSUMERS GWh
1995	3,864	3,143	1,229,399	0	27	2,058	29,499
1996	4,224	2,927	1,443,116	0	26	2,205	30,784
1997	4,188	2,830	1,479,859	0	27	2,299	30,851
1998	4,375	2,707	1,616,180	0	27	2,459	33,386
1999	4,334	2,629	1,648,536	0	27	2,509	33,442
2000	4,249	2,535	1,676,134	0	28	2,626	34,832
2001	3,872	2,551	1,517,836	0	28	2,698	35,263
2002	3,835	2,535	1,512,821	0	28	2,822	36,859
2003	4,001	2,643	1,513,810	0	29	2,946	37,957
2004	4,069	2,733	1,488,840	0	28	3,016	38,193
2005	4,403	2,813	1,565,205	0	28	3,264	40,286
2006	4,485	2,813	1,594,218	0	28	3,384	41,497
2007	4,561	2,813	1,621,534	0	28	3,505	42,673
2008	4,600	2,813	1,635,285	0	28	3,617	43,775
2009	4,638	2,813	1,648,721	0	28	3,729	44,892
2010	4,670	2,813	1,660,209	0	28	3,843	46,020
2011	4,701	2,813	1,671,100	0	28	3,966	47,180
2012	4,731	2,813	1,681,991	0	28	4,095	48,354
2013	4,757	2,813	1,691,157	0	28	4,221	49,535
2014	4,780	2,813	1,699,167	0	28	4,344	50,724

# SCHEDULE 2.3 HISTORY AND FORECAST OF ENERGY CONSUMPTION AND NUMBER OF CUSTOMERS BY CUSTOMER CLASS

(1)	(2)	(3)	(4)	(5)	(6)
YEAR	SALES FOR RESALE GWh	UTILITY USE & LOSSES GWh	NET ENERGY FOR LOAD GWh	OTHER CUSTOMERS (AVERAGE NO.)	TOTAL NO. OF CUSTOMERS
***		**********		·	
1995	1,846	2,322	33,667	17,774	1,271,785
1996	2,089	1,842	34,715	18,035	1,292,073
1997	1,758	1,996	34,605	18,562	1,314,507
1998	2,340	2,037	37,763	19,013	1,340,851
1999	3,267	2,451	39,160	19,601	1,376,597
2000	3,732	2,678	41,242	20,004	1,400,299
2001	3,839	1,830	40,933	20,752	1,444,958
2002	3,173	2,534	42,567	21,156	1,475,783
2003	3,359	2,595	43,911	21,665	1,510,516
2004	4,301	2,773	45,268	22,437	1,548,627
2005	4,572	2,773	47,630	22,922	1,574,447
2006	3,518	2,885	47,900	23,499	1,603,600
2007	3,753	2,945	49,372	24,079	1,632,925
2008	3,748	3,044	50,567	24,660	1,662,016
2009	3,674	3,082	51,648	25,241	1,690,993
2010	4,275	3,246	53,541	25,822	1,719,780
2011	4,427	3,275	54,882	26,403	1,748,339
2012	4,554	3,354	56,263	26,984	1,776,709
2013	4,706	3,435	57,676	27,565	1,804,949
2014	5.242	3,555	59,520	28,144	1,833,114

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#### SCHEDULE 3.1.1 HISTORY AND FORECAST OF SUMMER PEAK DEMAND (MW) BASE CASE

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(OTH)	(10)
YEAR	TOTAL	WHOLESALE	RETAIL	INTERRUPTIBLE	RESIDENTIAL LOAD MANAGEMENT	RESIDENTIAL CONSERVATION	COMM. / IND. LOAD MANAGEMENT	COMM. / IND. CONSERVATION	OTHER DEMAND REDUCTIONS	NÊT FIRM DEMAND
							Ray II			
1995	7.523	959	6,564	269	503	64	40	106	160	6,381
1996	7,470	828	6.642	309	565	69	41	120	167	6,199
1997	7.786	874	6,912	288	555	78	41	131	170	6,523
1998	8,367	943	7,424	291	438	97	42	142	182	7,175
1999	9,039	1.326	7.713	292	505	113	45	153	183	7,747
2000	8,911	1,319	7,592	277	455	127	48	155	75	7,774
2001	8,841	1,117	7,724	283	414	139	54	156	75	7.720
2002	9,421	1,203	8,218	305	390	153	43	159	75	8,296
2003	8,886	887	7.999	300	347	172	44	164	75	7,785
2004	9.554	1.071	8.483	531	283	188	37	166	75	8.274
2005	9,547	948	8.599	633	258	203	38	167	75	8.172
2006	9,808	993	8.815	420	228	214	39	169	75	8,663
2007	10,085	1,063	9.022	417	202	223	40	171	75	8,957
2008	10,298	1.093	9,205	413	179	232	41	172	75	9,186
2009	10,452	1.063	9,388	409	158	241	42	174	75	9,353
2010	10,802	1,213	9.589	400	140	250	43	176	75	9,719
2011	11,007	1,217	9,790	401	124	259	45	177	75	9,926
2012	11,218	1.230	9,988	402	109	269	46	179	75	10.138
2013	11,436	1,251	10,185	403	97	279	47	180	75	10,355
2014	11.651	1.269	10,382	404	86	289	48	182	75	10,567

#### Historical Values (1995 - 2004):

Col. (2) = recorded peak + implemented load control + residential and commercial/industrial conservation and customer-owned self-service cogeneration.

Cols. (5) - (9) = cumulative conservation and load control capabilities at peak. Col. (8) includes commercial load management and standby generation.

Col. (OTH) = Residential Heat Works load control, voltage reduction and customer-owned self-service cogeneration.

 $\text{Col.}\ (10)=(2)-(5)-(6)-(7)-(8)-(9)-(\text{OTH}),$ 

Projected Values (2005 - 2014):

Cols. (2) - (4) = forecasted peak without load control, conservation, and customer-owned self-service cogeneration.

Cols. (5) - (9) = cumulative conservation and load control capabilities at peak. Col. (8) includes commercial load management and standby generation.

Col. (OTH)  $\approx$  customer-owned self-service cogeneration.

Col. (10) = (2) - (5) - (6) - (7) - (8) - (9) - (0TH).

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#### SCHEDULE 3.3.1 HISTORY AND FORECAST OF ANNUAL NET ENERGY FOR LOAD (GWh) BASE CASE

(I)	(2)	(3)	(4)	(OTH)	(5)	(6)	(7)	(8)	(9)
YEAR	TOTAL	RESIDENTIAL CONSERVATION	COMM. / IND. CONSERVATION	OTHER ENERGY REDUCTIONS*	RETAIL	WHOLESALE	UTILITY USE & LOSSES	NET ENERGY FOR LOAD	LOAD FACTOR (%) **
	*								· · · · · · · · · · · · · · · · · · ·
1995	34,696	234	246	549	29,49 <b>9</b>	1,846	2,322	33,667	49.8
1996	35,812	249	285	562	30,785	2.089	1,841	34,715	44.9
1997	35,753	268	317	563	30,850	1,758	1,997	34,605	49.0
1998	38,950	289	333	565	33,387	2,340	2,036	37,763	53.9
1999	40,376	312	339	565	33,441	3,267	2,452	39,160	50.0
2000	42,486	334	345	565	34,832	3,732	2,678	41,242	50.5
2001	42,200	354	349	564	35,263	3,839	1,831	40,933	47.5
2002	43,860	377	352	564	36,859	3,173	2,535	42,567	50.0
2003	45,232	400	357	564	37,957	3,359	2,595	43,911	47.7
2004	46.617	424	360	565	38,193	4,301	2,774	45,268	56.5
2005	49,002	445	363	564	40,286	4,620	2,724	47,630	61.0
2006	49,289	459	365	564	41,497	3,565	2,838	47,900	59.4
2007	50,778	474	368	564	42,673	3,761	2,938	49,372	58,1
2008	51,992	489	371	565	43,775	3,748	3,044	50,567	58.1
2009	53,090	504	374	564	44,892	3,674	3,082	51,648	58.2
2010	55,001	519	377	564	46,020	4,275	3,246	53,541	58.1
2011	56,362	536	380	564	47,180	4,427	3,275	54,882	58.3
2012	57,763	552	383	565	48,354	4,554	3,355	56,263	58.4
2013	59,194	568	386	564	49,535	4,706	3,435	57,676	58.8
2014	61,057	585	389	564	50,724	5,242	3,554	59,520	59.5

\* Column (OTH) includes Conservation Energy For Lighting and Public Authority Customers, Customer-Owned Self-service Cogeneration and Load Control Programs.

Load Factors for historical years are calculated using the actual winter peak demand except the 1998 and 2004 historical load factors which are based on the actual summer peak demand.

Load Factors for future years are calculated using the net firm winter peak demand (Schedule 3.2.1)

#### SCHEDULE 4

# PREVIOUS YEAR ACTUAL AND TWO-YEAR FORECAST OF PEAK DEMAND AND NET ENERGY FOR LOAD BY MONTH

(1)	(2)	(3)	(4)	(5)	(6)	(7)
	ACT	UAL	FOREC	AST	FORECA	AST
	20	04	2005		2006	
	PEAK DEMAN	ND NEL	PEAK DEMAND	NEL	PEAK DEMAND	NEL
MONTH	MW	GWh	MW	GWh	MW	GWh
JANUARY	8,748	3,504	8,914	3,735	9,200	3,695
FEBRUARY	7,791	3,090	7,115	3,362	7,335	3,303
MARCH	6,017	3,171	6,008	3,601	6,216	3,553
APRIL	6,760	3,176	6,691	3,483	6,956	3,409
MAY	8,446	3,960	7,659	4,195	7,965	4,142
JUNE	9,125	4,481	8,021	4,390	8,494	4,490
JULY	9,058	4,621	8,147	4,762	8,641	4,884
AUGUST	8,842	4,432	8,172	4,802	8,663	4,918
SEPTEMBER	8,628	4,064	7,689	4,369	8,136	4,444
OCTOBER	8,324	3,900	7,146	3,904	7,561	3,945
NOVEMBER	7,313	3,237	5,792	3,379	6,149	3,422
DECEMBER	8,303	3,632	7,356	3,648	7,899	3,695
TOTAL		45,268		47.630		47,900
			and the second			

NOTE: "Actual" = "Total" - "Interruptible" - "Res. LM" - "C/I LM" - "Voltage Reduction & Standby Generation"

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# <u>CHAPTER 3</u> FORECAST OF FACILITIES REQUIREMENTS

# RESOURCE PLANNING FORECAST OVERVIEW OF CURRENT FORECAST

#### Supply-Side Resources

PEF has a summer total capacity resource of 9,769 MW, as shown in Table 3.1. This capacity resource includes utility purchased power (474 MW), non-utility purchased power (820 MW), combustion turbine (2,619 MW, 143 MW of which is owned by Georgia Power for the months June through September), nuclear (769 MW), fossil steam (3,882 MW) and combined-cycle plants (1,205 MW). Table 3.2 shows PEF's contracts for firm capacity provided by Qualifying Facilities (QFs).

#### Demand-Side Programs

Total DSM resources are shown in Schedules 3.1.1 and 3.2.1 of Chapter 2. These programs include Non-Dispatchable DSM, Interruptible Load, and Dispatchable Load Control resources. PEF's 2005 Ten-Year Site Plan Demand-Side Management projections are consistent with the DSM Goals established by the Commission in Docket No. 040031-EG.

#### **Capacity and Demand Forecast**

PEF's forecasts of capacity and demand for the projected summer and winter peaks are shown in Schedules 7.1 and 7.2, respectively. PEF's forecasts of capacity and demand are based on serving expected growth in retail requirements in its regulated service area and meeting commitments to wholesale power customers who have entered into supply contracts with PEF. In its planning process, PEF balances its supply plan for the needs of retail and wholesale customers and endeavors to ensure that cost-effective resources are available to meet the needs across the customer base. Over the years, as wholesale markets have grown more competitive, PEF has remained active in the competitive solicitations while planning in a manner that maintains an appropriate balance of commitments and resources within the overall regulated supply framework.

#### **Base Expansion Plan**

PEF's planned supply resource additions and changes are shown in Schedule 8 and are referred to as PEF's Base Expansion Plan. This Plan includes 3,357 MW (summer rating) of proposed new capacity additions through the summer of 2014. As identified in Schedule 8, PEF's next planned need is the Hines 3 Unit, a 516 MW (summer) power block with a December 2005 in-service date. PEF's self-build option for Hines Unit 3 was determined to be the most cost-effective alternative (FPSC Docket No. 020953-EI, Order No. PSC-03-0175-FOF-EI, issued February 4, 2003). After Hines 3, the next planned unit is Hines 4, 461 MW (summer) power block with a December 2007 in-service date. Hines Unit 4 was granted its Need Certificate by the FPSC in November 2004 (Docket No. 040817-EI, Order No. PSC-04-1168-FOF-EI).

PEF's Base Expansion Plan projects requirements for additional combined-cycle units with proposed in-service dates of 2009, 2010, 2012, 2013 and 2014. These high efficiency gas-fired combined-cycle units, together with the Central Power & Lime Purchase from December 2005 through December 2015, the Shady Hills Purchase from December 2006 through April 2014, and the Southern Company Purchase from June 2010 through December 2015 help the PEF system meet the growing energy requirements of its customer base and also contribute to meeting the requirements of the 1990 Clean Air Act Amendments. Fuel switching, SO<sub>2</sub> emission allowance purchases, re-dispatching of system generation and technology improvements are additional options available to PEF to ensure compliance with these important environmental requirements. Status reports and specifications for new generation facilities are included in Schedule 9. As shown in Schedule 10, there are no new transmission lines associated with the Hines 3 combined-cycle unit, and only one new line (Hines-West Lake Wales 230 kV) required for the Hines 4 combined-cycle unit.

Current planning studies identify gas-fired units as the most economic alternatives for system expansion over the ten-year planning term. New coal units may become a competitive option beyond the ten-year timeframe should forecasted gas prices continue to increase versus coal over that term. The uncertainties associated with fuel price forecasts and the long lead times required to site, permit, license, engineer, and construct a coal unit will require additional study of coal options in the next planning cycle.

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The recently issued Clean Air Interstate Rule (CAIR) may impact PEF's need for new capacity. While a compliance plan has not yet been finalized, some alternatives may impact the capacity of existing and/or future generation resources, resulting in a need for additional capacity. Once the compliance plan has been finalized, PEF will quantify the impacts on generating resources and determine if any additional capacity is needed.

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# TABLE 3.1

## PROGRESS ENERGY FLORIDA

# TOTAL CAPACITY RESOURCES OF POWER PLANTS AND PURCHASED POWER CONTRACTS

# AS OF DECEMBER 31, 2004

CUMANT

PLANTS	ant San San San San San San San San San San San San San	NUMBER OF UNITS	SUMMER NET DEPENDABLE CAPABILITY (MW)			
Nuclear Steam	1					
Crystal River		1	<u>769</u> (1)			
Total Nuclear Steam		la de la companya de	769			
Fossil Steam						
Crystal River		4	2 302			
Anclote		2	2,302			
Paul L. Bartow		23	993			
Suwannee River		3	444			
Total Fossil Steam		12	<u>143</u> 3,882			
		12	5,002			
Combined analo						
Combined-cycle Hines Energy Complex		•	220			
Tiger Bay		2	998			
Total Combined-cycle		$\frac{1}{3}$	207			
Total Combined-cycle		3	1,205			
Combustion Turbine						
DeBary		10	667			
Intercession City		14	667 1.041 (2)			
Bayboro		4	1,041 (2)			
Bartow		4	184			
Suwannee		3	187			
Tumer		4	154			
Higgins		4	134			
Avon Park		2	52			
University of Florida		1	32			
Rio Pinar		1	13			
Total Combustion Turbine		47	2,619			
			2,019			
Total Units		63				
Total Net Generating Capability			8,475			
<ol> <li>Adjusted for sale of approxin</li> <li>Includes 143 MW owned by (</li> </ol>	ately 8.2% o Georgia Pow	of total capacity er Company (Jun-Sep)	6,775			
Purchased Power		-				
Qualifying Facility Contracts		10	220			
Investor Owned Utilities		19	820			
investor Owned Outlines		2	474			
TOTAL CAPACITY RESOURCES			9,769			

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#### SCHEDULE 7.1

#### FORECAST OF CAPACITY, DEMAND AND SCHEDULED MAINTENANCE AT TIME OF SUMMER PEAK

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
	TOTAL	FIRM	FIRM		TOTAL	SYSTEM FIRM					
	INSTALLED	CAPACITY	CAPACITY		CAPACITY	SUMMER PEAK	RESEF	RVE MARGIN	SCHEDULED	RESER	VE MARGIN
	CAPACITY	IMPORT	EXPORT	QF	AVAILABLE	DEMAND	BEFORE	MAINTENANCE	MAINTENANCE	AFTER M	AINTENANCE
YEAR	MW	MW	MW	M₩	MW	MW	<u></u> MW	% OF PEAK	MW	MW	% OF PEAK
2005	8.332	799	r 0	820	9,951	8.173	1,778	22%	0	1,778	22%
2006	8.848	767	0	820	10.435	8.663	1,772	20%	0	1.772	20%
2007	8.848	1,087	0	802	10.737	8.958	1,779	20%	0	1,779	20%
2008	9.309	1.087	0	787	11.183	9.187	1,996	22%	0	1,996	22%
2009	9,309	1.087	0	787	11,183	9.353	1.830	20%	0	1.830	20%
2010	9.785	1.098	0	787	11,670	9,719	1,951	20%	0	1.951	20%
2011	10,261	1.028	0	787	12,076	9,926	2,150	22%	0	2.150	22%
2012	10.737	1,028	0	787	12,552	10,138	2,414	24%	0	2.414	24%
2013	10,737	1,028	0	677	12,442	10.355	2.087	20%	0	2,087	20%
2014	11.689	550	0	490	12.729	10.567	2.162	20%	0	2.162	20%

\* Progress Energy is pursuing seasonal purchases of approximately 300 MW in 2005 and 150 MW in 2006. The deals are not yet consummated as of the time of the Ten-Year Site Plan filling. Since the purchase is expected to be from peaking capacity, no energy impact has been included in the plan at this time.

The recently issued Clean Air Interstate Rule (CAIR) may impact PEFs need for new capacity. While a compliance plan has not yet been finalized, some alternatives may impact the capacity of existing and/or future generation resources, resulting in a need for additional capacity. Once the compliance plan has been finalized. PEF will quantify the impacts on generating resources and determine if any additional capacity is needed.

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# SCHEDULE 8 PLANNED AND PROSPECTIVE GENERATING FACILITY ADDITIONS AND CHANGES

AS OF JANUARY 1, 2004 THROUGH DECEMBER 31, 2014

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
								CONST.	COM'L IN-	EXPECTED	GEN. MAX.	NET CAPA	BILITY		
	UNIT	LOCATION	UNIT	FL	EL	FUEL TRA	NSPORT	START	SERVICE	RETIREMENT	NAMEPLATE	SUMMER	WINTER	ł	
PLANT NAME	<u>NO.</u>	(COUNTY)	<u> </u>	<u>PRI.</u>	<u>alt.</u>	PRL	<u>ALT.</u>	<u>MO. / YR</u>	<u>MO. / Y.B</u>	<u>MO. / YR</u>	<u>ĸw</u>	₩₩	<u>MW</u>	STATUS	NOTES
HINES ENERGY COMPLEX	3	POLK	сс	NG	DFO	PL	Τĸ	9/2003	12/2005			516	582	v	
HINES ENERGY COMPLEX	4	POLK	сс	NG	DFO	PL	Ťκ	12/2005	12/2007			461	517	т	
HINES ENERGY COMPLEX	5	POLK	СС	NG	DFO	PL	тк	5/2007	12/2009			476	548	Ρ	
HINES ENERGY COMPLEX	6	POLK	CC	NG	DFO	PL	тк	5/2008	12/2010			476	548	Р	
COMBINED-CYCLE	1	UNKNOWN	сс	NG	DFO	PL.	UN	10/2009	5/2012			476	548	Р	
COMBINED-CYCLE	2	UNKNOWN	сс	NG	DFO	PL.	UN	5/2011	12/2013			476	548	P	
COMBINED-CYCLE	3	UNKNOWN	сс	NG	DFO	PL	UN	10/2011	5/2014			476	548	Р	

DOCKET NO. 070052-EI EXTRACT FROM PEF 2006 TYSP FIPUG EXHIBIT

ID# 22

# Progress Energy Florida Ten-Year Site Plan

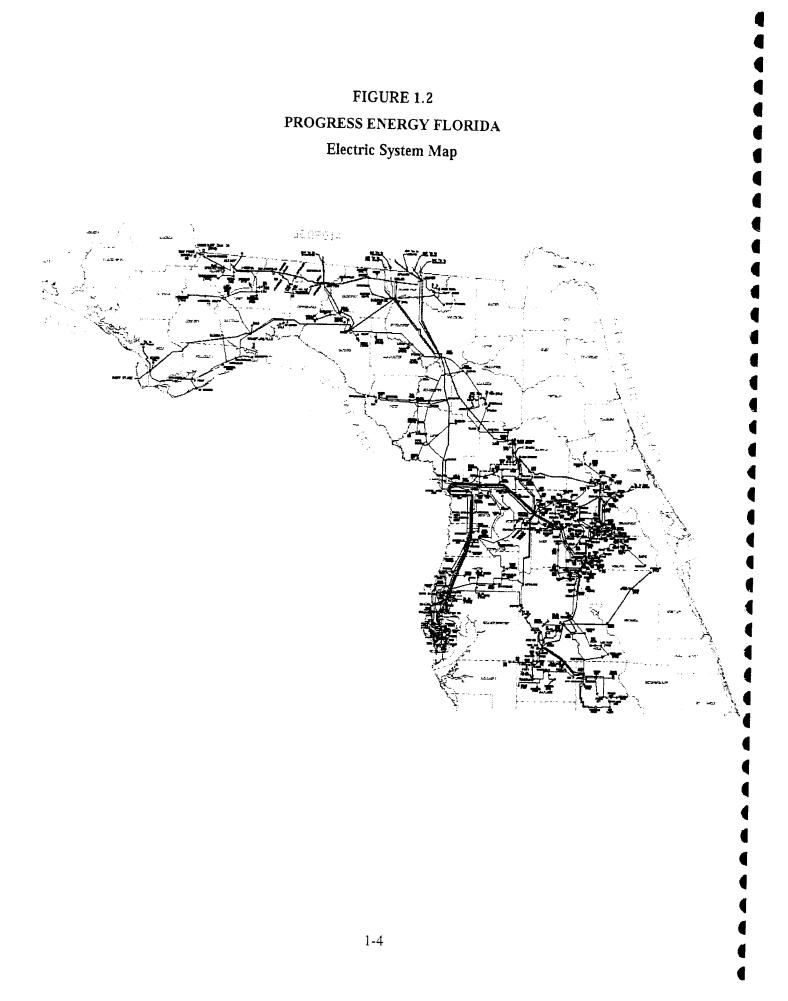
April 2006

2006-2015

Submitted to: Florida Public Service Commission



DOCUMENT NUMPER-DATE 02982 APR-38 FPSC-COMMISSION CLEED



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SCHEDULE 1 EXISTING GENERATING FACILITIES

AS OF DECEMBER 31, 2005

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(14)	(12)	(13)	(14)
	( D.). <del></del>	LOCATION		-					COM'L IN-	EXPECTED	GEN. MAX.		ABILITY
	UNIT		UNIT		UEL		LANSPORT	ALT. FUEL	SERVICE	RETIREMENT	NAMÉPLATE		WINTER
PLANTNAME	<u>NO.</u>	(COUNTY)	TYPE	<u>PRI.</u>	<u>ALI.</u>	<u>PRI,</u>	<u>ALT,</u>	DAYS USE	MO/YEAR	MO./YEAR	<u>KW</u>	<u>MW</u>	<u>MW</u>
STEAM													
ANCLOTE	1	PASCO	ST	RF0	NG	PL.	PL		10/74		556.200	498	522
ANCLOTE	2	PASCO	ST	RFO	NG	PL	PL		10/78		556,200	495	522
BARTOW	1	PINELLAS	ST	RFO		WA			09/58		127,500	121	123
BARTOW	2	PINELLAS	ST	rfo		WA			08/61		127,500	119	121
BARTOW	3	PINELLAS	ST	RFO	NG	WA	PL		07/63		239,360	204	208
CRYSTAL RIVER	١	CITRUS	ST	BIT		WA			10/66		440,550	379	383
CRYSTAL RIVER	2	CITRUS	ST	BIT		WA			11/69		523,800	486	491
CRYSTAL RIVER	3 •	CITRUS	ST	NUC		TK			03/77		890,460	769	788
CRYSTAL RIVER	4	CITRUS	ST	BIT		WA			12/82		739,260	720	735
CRYSTAL RIVER	5	CITRUS	ST	BIT		WA			10/84		739,260	717	732
SUWANNEE RIVER	1	SUWANNEE	ST	RFO	NG	TK/RR	PL		11/53		34.500	32	33
SUWANNEE RIVER	2	SUWANNEE	ST	RFO	NG	TK/RR	PL		11/54		37,500	31	32
SUWANNEE RIVER	3	SUWANNEE	ST	RFO	NG	TK/RR	PL		10/56		75,000	80	81
												4,651	4,771
COMBINED-CYCLE													
HINES ENERGY COMPLEX	1	POLK	сс	NG	DFO	PL	TK	2***	04/99		546,550	482	529
HINES ENERGY COMPLEX	2	POLK	сс	NG	DFO	PL	ŢΚ		12/03		598.000	516	582
HINES ENERGY COMPLEX	3	POLK	сс	NG	DFO	PL	τĸ		11/05		589,900	501	576
TIGER BAY	1	POLK	cc	NG		PL			08/97		278,223	207	223
												1,706	1,910
COMBUSTION TURBINE												1,700	1,910
AVON PARK	Pl	HIGHLANDS	GT	NG	DFO	PL	TK	3***	12/68		33,790	26	32
AVON PARK	P2	HIGHLANDS	GT	DFO		TK		•	12/68		33,790	20 26	32
BARTOW	P1, P3	PINELLAS	GT	DFO		WA			05/72,06/72		111,400	20 92	106
BARTOW	P2	PINELLAS	GT	NG	DFO	PL	WA	8	06/72		55,700	46	53
BARTOW	P4	PINELLAS	GT	NG	DFO	PL	W/A	8	06/72		55,700	49	60
BAYBORO	P1-P4	PINELLAS	GT	DFO	2.0	WA		0	04/73		226,800	184	232
DEBARY	P1-P6	VOLUSIA	GT	DFO		TK			12/75-04/76		401,220		
DEBARY	P7-P9	VOLUSIA	GT	NG	DFO	PL	TK	8	10/92		345,000	324	390
DEBARY	P10	VOLUSIA	GT	DFO	0.0	TK	15	0	10/92			258	279
HIGGINS	P1-P2	PINELLAS	GT	NG	DFO						115,000	85	93
HIGGINS	P3-P4	PINELLAS	GT	NG		PL	TK		03/69, 04/69		67,580	54	64
					DFO	PL	TK	1	12/70, 01/71		85,850	68	70
INTERCESSION CITY	P1-P6	OSCEOLA	GT	DFO		PL.TK			05/74		340,200	294	366
INTERCESSION CITY	P7-P10	OSCEOLA	OT	NG	DFO	PL	PL,TK	5	10/93		460.000	352	376
INTERCESSION CITY	P11 **	OSCEOLA	GT	DFO		PL.TK			01/97		165,000	143	170
INTERCESSION CITY	P12-P14	OSCEOLA	GT	NG	DFO	PL	PL,TK	5	12/00		345,000	252	294
RIO PINAR	PI	ORANGE	GT	DFO		TK			11/70		19.290	13	16
SUWANNEE RIVER	P1, P3	SUWANNEE	GT	NG	DFO	PL	ŤΚ	9**=	10/80, 11/80		122,400	110	134
SUWANNEE RIVER	P2	SUWANNEE	GŤ	DFO		τĸ.			10/80		61,200	54	67
TURNER	P1-P2	VOLUSIA	GT	DFO		ΤK			10/70		38,580	26	32
TURNER	P3	VOLUSIA	GT	DFO		TK			08/74		71,200	65	82
TURNER	P4	VOLUSIA	GT	DFO		ΤK			08/74		71,200	63	80
UNTV. OF FLA.	PI	ALACHUA	GT	NG		PL			01/94		43,000	<u>35</u>	41
												2,619	3,069
<ul> <li>REPRESENTS APPROXIMATELY 91.6</li> </ul>	% PEFOWNE	RSHIP OF UNIT										-,/	-1
** SUMMER CAPABILITY JUNE THROU			RGLA POW	ER COM						TOTAL DESC	URCES (MW)	8,976	9,750
and the second sec													

#### SCHEDULE 2.1 HISTORY AND FORECAST OF ENERGY CONSUMPTION AND NUMBER OF CUSTOMERS BY CUSTOMER CLASS

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
		RURAL	. AND RESI	DENTIAL			COMMERC	IAL
YEAR	PEF POPULATION	MEMBERS PER HOUSEHOLD	GWħ	AVERAGE NO. OF CUSTOMERS	AVERAGE KWh CONSUMPTION PER CUSTOMER	GWh	AVERAGE NO. OF CUSTOMERS	AVERAGE KWh CONSUMPTION PER CUSTOMER
1996	2,847,802	2.494	15,481	1,141,671	13.560	8,848	129,440	68.356
1997	2,895.266	2,495	15,080	1,160.611	12.993	9.257	132.504	69,862
1998	2,959.509	2.502	16,526	1,182,786	13.972	9,999	136.345	73.336
1999	3,047.293	2.511	16.245	1,213,470	13.387	10.327	140,897	73,295
2000	3,044,449	2.467	17,116	1,234,286	13,867	10.813	143,475	75,368
2001	3,141,867	2.465	17,604	1.274.672	13.810	11,061	146,983	75.251
2002	3.207.661	2.465	18,754	1,301.515	14,409	11.420	150.577	75.842
2003	3.286,782	2.468	19,429	1,331.914	14,587	11,553	154,294	74,876
2004	3,348.630	2.454	19,347	1,364.677	14,177	11,734	158,780	73.898
2005	3,425.783	2.452	19,894	1,397.012	14,240	11,945	161,001	74.190
2006	3,473,481	2.447	20,187	1,419,449	14,222	11,899	163,107	72.952
2007	3,530.429	2.441	20,731	1.446.239	14,334	12,292	166,477	73,836
2008	3,585.407	2.435	21,244	1.472.551	14,427	12.725	169,784	74,947
2009	3,639,074	2.428	21,789	1,498,885	14,537	13,155	173,090	75,998
2010	3,690.763	2.420	22,316	1,524,944	14,634	13.559	176.360	76.880
2011	3,740,415	2.412	22,839	1,550,477	14,730	13.966	179.611	77,759
2012	3,788,512	2.404	23,353	1,575,780	14,820	14,370	182,781	78.618
2013	3,835,918	2.396	23,882	1.600,906	14,918	14.785	185.927	79,519
2014	3,883,825	2.389	24,411	1.625.899	15,014	15.204	189.055	80.419
2015	3,932,139	2.382	24,949	1,650,873	15.113	15.629	192.181	81,323

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#### SCHEDULE 2.2 HISTORY AND FORECAST OF ENERGY CONSUMPTION AND NUMBER OF CUSTOMERS BY CUSTOMER CLASS

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
		INDUSTRIAL					
	.,				STREET &	OTHER SALES	TOTAL SALES
		AVERAGE	AVERAGE KWh	RAILROADS	HIGHWAY	TO PUBLIC	TO ULTIMATE
		NO. OF	CONSUMPTION	AND RAILWAYS	LIGHTING	AUTHORITIES	CONSUMERS
YEAR	GWh	CUSTOMERS	PER CUSTOMER	GWh	GWh	GWh	GWh
**********	*****************				•••••	*******************	
1996	4,224	2,927	1,443.116	0	26	2,205	30,784
1997	4,188	2,830	1,479,859	0	27	2,299	30,851
1998	4.375	2.707	1,616,180	0	27	2,459	33,386
1999	4,334	2,629	1.648.536	0	27	2,509	33,442
2000	4,249	2,535	1.676,134	0	28	2,626	34,832
2001	3,872	2,551	1,517,836	0	28	2,698	35,263
2002	3,835	2,535	1,512,821	0	28	2,822	36,859
2003	4,001	2,643	1,513.810	0	29	2,946	37,957
2004	4,069	2.733	1,488,840	0	28	3,016	38,193
2005	4,140	2,703	1,531,632	0	27	3,171	39,178
2006	4,152	2,687	1,545,218	0	28	3,209	39,475
2007	4,213	2.687	1,567,920	0	28	3,327	40,591
2008	4,383	2,687	1,631,187	0	28	3,436	41,816
2009	4,416	2,687	1,643.469	0	28	3,547	42,935
2010	4,453	2,687	1,657,239	0	28	3,651	44,006
2011	4,491	2,687	1,671,381	0	28	3,756	45,081
2012	4,539	2,687	1,689,245	0	28	3,861	46,150
2013	4,579	2,687	1,704,131	0	28	3,968	47.241
2014	4,622	2,687	1,720.134	0	28	4,076	48,341
2015	4,662	2,687	1,735,020	1	28	4,186	49,456

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# SCHEDULE 2.3 HISTORY AND FORECAST OF ENERGY CONSUMPTION AND NUMBER OF CUSTOMERS BY CUSTOMER CLASS

(1)	(2)	(3)	(4)	(5)	(6)
	SALES FOR	UTILITY USE	NET ENERGY	OTHER	TOTAL
	RESALE	& LOSSES	FOR LOAD	CUSTOMERS	NO. OF
YEAR	GWh	GWh	GWh	(AVERAGE NO.)	CUSTOMERS
1996	2,089	1,842	34,715	18,035	1,292,073
1997	1,758	1,996	34,605	18,562	1,314,507
1998	2,340	2,037	37,763	19,013	1,340,851
1999	3,267	2,451	39,160	19,601	1,376,597
2000	3,732	2,678	41,242	20,004	1,400,299
2001	3,839	1,831	40,933	20,752	1,444,958
2002	3,173	2,534	42,567	21,155	1,475,783
2003	3,359	2,595	43,911	21,665	1,510,516
2004	4,301	2,773	45,268	22,437	1,548,627
2005	5,195	2,505	46,878	22,701	1,583,417
2006	4,038	2,654	46,167	23,160	1,608,403
2007	4,430	2,739	47,759	23,719	1,639,122
2008	4,410	2,850	49,076	24,279	1,669,301
2009	4,323	2,890	50,148	24,837	1,699,499
2010	4,958	3,042	52,006	25,388	1,729,379
2011	5,083	3,055	53,219	25,933	1,758,708
2012	5,159	3,125	54,434	26,474	1,787,722
2013	5,263	3,199	55,704	27,008	1,816,528
2014	5,343	3,265	56,948	27,537	1,845,178
2015	5,419	3,337	58,211	28,059	1,873,800

#### SCHEDULE 3.1.1 HISTORY AND FORECAST OF SUMMER PEAK DEMAND (MW) BASE CASE

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(OTH)
YEAR	TOTAL	WHOLESALE	RETAIL	INTERRUPTIBLE	RESIDENTIAL LOAD MANAGEMENT	RESIDENTIAL CONSERVATION	COMM. 7 IND. LOAD MANAGEMENT	COMM. / IND. CONSERVATION	OTHER DEMAND REDUCTIONS
			•••••••••	•••••		•			
1996	7.470	828	6.642	309	565	69	41	120	167
1997	7.786	874	6.912	288	555	78	41	131	170
1998	8.367	943	7.424	291	438	97	42	142	182
1999	9,039	1,326	7.713	292	505	113	45	153	183
2000	8.911	1.319	7,592	277	455	127	48	155	75
2001 -	8.841	1.117	7.724	283	414	139	54	156	75
2002	9,421	1.203	8.218	305	390	153	43	159	75
2003	8.886	887	7.999	300	347	172	44	164	75
2004	9,554	1,071	8,483	531	283	188	37	166	75
2005	10.316	1,118	9,198	393	250	203	38	167	75
2006	9,915	1,105	8.810	419	228	214	39	169	75
2007	10,226	1,181	9,044	431	202	223	40	171	75
2008	10,487	1.223	9.264	437	179	232	41	172	75
2009	10.676	1,201	9,475	433	158	241	42	174	75
2010	11,039	1,357	9.681	424	140	250	43	176	75
2011	11.260	1.372	9,888	425	124	259	45	177	75
2012	11.487	1,396	10.091	426	109	269	46	179	75
2013	11,699	1,406	10.293	427	97	279	47	180	75
2014	11,921	1,429	10.492	428	86	289	48	182	75
2015	12,139	1,446	10,693	429	76	293	48	183	75

#### Historical Values (1996 - 2005):

Col. (2) = recorded peak + implemented load control  $\tau$  residential and commercial/industrial conservation and customer-owned self-service cogeneration. Cols. (5) - (9) = cumulative conservation and load control capabilities at peak. Col. (8) includes commercial load management and standby generation. Col. (OTH) = voltage reduction and customer-owned self-service cogeneration.

Col.(10) = (2) - (5) - (6) - (7) - (8) - (9) - (OTH).

#### Projected Values (2006 - 2015):

Cols. (2) - (4) = forecasted peak without load control, conservation, and customer-owned self-service cogeneration.

Cols. (5) - (9) = cumulative conservation and load control capabilities at peak. Col. (8) includes commercial load management and standby generation. Col. (OTH) = customer-owned self-service cogeneration.

Col. (10) = (2) - (5) - (6) - (7) - (8) - (9) - (OTH).

#### SCHEDULE 3.3.1 HISTORY AND FORECAST OF ANNUAL NET ENERGY FOR LOAD (GWh) BASE CASE

(1)	(2)	(3)	(4)	(OTH)	(5)	(6)	(7)	(8)	(9)
		RESIDENTIAL	COMM. / IND.	OTHER ENERGY			UTILITY USE	NET ENERGY	LOAD FACTOR
YEAR	TOTAL	CONSERVATION	CONSERVATION	REDUCTIONS*	RETAIL	WHOLESALE		FOR LOAD	(%) **
1996	35,812	249	285	562	30,785	2,089	1,841	34,715	44.9
1997	35,753	268	317	563	30,850	1,758	1,997	34,605	49.0
1998	38,950	289	333	565	33,387	2,340	2.036	37,763	53.9
1999	40,376	312	339	565	33,441	3,267	2,452	39,160	50.0
2000	42,486	334	345	565	34,832	3,732	2,678	41,242	50.5
2001	42.200	354	349	564	35,263	3,839	1,831	40,933	47.5
2002	43.860	377	352	564	36,859	3,173	2,535	42,567	50.0
2003	45,232	400	357	564	37,957	3,359	2,595	43,911	47.7
2004	46,617	424	360	565	38,193	4.301	2,774	45,268	56.5
2005	48,250	445	363	564	39,177	5,195	2,506	46,878	52.3
2006	47,556	459	365	564	39,475	4,038	2,654	46,167	58.3
2007	49,165	474	368	564	40,591	4,430	2,738	47,759	56.9
2008	50,501	489	371	565	41,816	4,410	2,850	49.076	57.1
2009	51,590	504	374	564	42,935	4,323	2,890	50,148	56.5
2010	53,466	519	377	564	44,006	4,958	3,042	52,006	56.4
2011	54,699	536	380	564	45,081	5,083	3,055	53,219	56.6
2012	55,934	552	383	565	46,150	5,159	3,125	54,434	56. <b>5</b>
2013	57,222	568	386	564	47,242	5,263	3,199	55,704	56.8
2014	58,485	585	389	564	48,341	5,343	3,264	56,948	56.9
2015	59,749	585	389	564	49,455	5,419	3,337	58,211	57.1

\* Column (OTH) includes Conservation Energy For Lighting and Public Authority Customers, Customer-Owned Self-service Cogeneration and Load Control Programs.

\*\* Load Factors for historical years are calculated using the actual winter peak demand except the 1998 and 2004 historical load factors which are based on the actual summer peak demand. Load Factors for future years are calculated using the net firm winter peak demand (Schedule 3.2.1)

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#### SCHEDULE 4

# PREVIOUS YEAR ACTUAL AND TWO-YEAR FORECAST OF PEAK DEMAND AND NET ENERGY FOR LOAD BY MONTH

(1)	(2)	(3)	(4)	(5)	(6)	(7)	
	ACTI	JAL	FOREC	CAST	F O R E C A S T 2007		
	200	5	200	6			
	PEAK DEMAND	NEL	PEAK DEMAND	NEL	PEAK DEMAND	NEL	
MONTH	MW	GWh	MW	GWh	MW	GWh	
JANUARY	10,226	3,582	9,047	3,566	9,584	3,724	
FEBRUARY	7,398	3,106	6,992	3,133	7,455	3.273	
MARCH	7,609	3,592	6,008	3,337	6,501	3,552	
APRIL	7,011	3,283	6,970	3,284	7,467	3,438	
MAY	8,478	3,923	8,025	4,041	8,511	4,190	
JUNE	8,927	4,215	8,595	4,337	8,914	4,450	
JULY	9,671	4,947	8,754	4,731	9,044	4,863	
AUGUST	9,681	5,031	8,771	4,748	9,084	4,885	
SEPTEMBER	9,090	4,461	8,184	4,308	8,488	4,433	
OCTOBER	8,301	3,968	7,692	3,837	7,963	3,952	
NOVEMBER	6,424	3,215	6,282	3,267	6,573	3,347	
DECEMBER	7,772	3,555	7,767	3,578	7,860	3,652	
TOTAL		46,878		46,167		47,759	

# <u>CHAPTER 3</u> FORECAST OF FACILITIES REQUIREMENTS

# RESOURCE PLANNING FORECAST OVERVIEW OF CURRENT FORECAST

#### Supply-Side Resources

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PEF has a summer total capacity resource of 10,413 MW, as shown in Table 3.1. This capacity resource includes nuclear (769 MW), fossil steam (3,882 MW), combined cycle plants (1,706 MW), combustion turbine (2,619 MW, 143 MW of which is owned by Georgia Power for the months June through September), utility purchased power (617 MW), and non-utility purchased power (820 MW). Table 3.2 shows PEF's contracts for firm capacity provided by Qualifying Facilities (QF's).

#### Demand-Side Programs

Total DSM resources are shown in Schedules 3.1.1 and 3.2.1 of Chapter 2. These programs include Non-Dispatchable DSM, Interruptible Load, and Dispatchable Load Control resources. PEF's 2006 Ten-Year Site Plan Demand-Side Management projections are consistent with the DSM Goals established by the Commission in Docket No. 040031-EG.

### Capacity and Demand Forecast

PEF's forecasts of capacity and demand for the projected summer and winter peaks are shown in Schedules 7.1 and 7.2, respectively. PEF's forecasts of capacity and demand are based on serving expected growth in retail requirements in its regulated service area and meeting commitments to wholesale power customers who have entered into supply contracts with PEF. In its planning process, PEF balances its supply plan for the needs of retail and wholesale customers and endeavors to ensure that cost-effective resources are available to meet the needs across the customer base. Over the years, as wholesale markets have grown more competitive, PEF has remained active in the competitive solicitations while planning in a manner that maintains an appropriate balance of commitments and resources within the overall regulated supply framework.

#### **Base Expansion Plan**

PEF's planned supply resource additions and changes are shown in Schedule 8 and are referred to as PEF's Base Expansion Plan. This Plan includes 3,910 net MW (summer rating) of proposed new capacity additions through the summer of 2015. As identified in Schedule 8, PEF's next planned need is the Hines 4 Unit, a 461 MW (summer) power block with a December 2007 in-service date. PEF's self-build option for Hines Unit 4 was determined to be the most cost-effective alternative, followed by the Bartow Repowering Project to be completed by June 2009.

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PEF's Base Expansion Plan projects requirements for additional units with proposed in-service dates of 2007 through 2015. These units, together with the Central Power & Lime Purchase (December 2005 through December 2010), the TEA purchase (from June through September 2006, December 2006 through February 2007, and June through September 2007), the Shady Hills Purchase (April 2007 through April 2014), and the Southern Company Purchase (June 2010 through December 2015), help the PEF system meet the growing energy requirements of its customer base. Some of the identified unit additions may be impacted by PEF's ability to extend or replace existing purchase power contracts, as well as contracts with cogenerators and QF's. Status reports and specifications for new generation facilities are included in Schedule 9. Shown in Schedule 10 are the new transmission lines associated with Hines #4 and the Bartow Repowering Project.

Current planning studies identify gas-fired units as the most economic alternatives for system expansion in the near term. The forecast of natural gas prices has risen to the point where new pulverized coal units appear to be a cost effective alternative. Uncertainties over future fuel price relationships, environmental regulations, and the ability to site new coal units in Florida will require ongoing re-evaluations of the coal option. New nuclear technologies appear to offer favorable long-term economics, and provide favorable environmental characteristics, measured against possible emission limits imposed by the recently issued Clean Air Interstate Rule (CAIR). PEF is currently evaluating the nuclear option with the intent to pursue preliminary licensing activities should suitable sites for new nuclear units be available. Currently, the expected lead time to site, license, engineer, and construct a new nuclear unit place its in-service date outside the ten-year planning horizon presented in this document.

# TABLE 3.1

# PROGRESS ENERGY FLORIDA

# TOTAL CAPACITY RESOURCES OF POWER PLANTS AND PURCHASED POWER CONTRACTS

# AS OF DECEMBER 31, 2005

PLANTS	NUMBER OF UNITS	SUMMER NET DEPENDABLE CAPABILITY (MW)		
Nuclear Steam				
Crystal River	1	<u>769</u> (1)		
Total Nuclear Steam	$\frac{1}{1}$	769		
Fossil Steam				
Crystal River	4	2,302		
Anclote	2	993		
Bartow	3	444		
Suwannee River	<u>3</u>	143		
Total Fossil Steam	12	3,882		
Combined Cycle				
Hines Energy Complex	3	1,499		
Tiger Bay		207		
Total Combined cycle	$\frac{1}{4}$	1,706		
Combustion Turbine				
DeBary	10	667		
Intercession City	14	1,041 (2)		
Bayboro	4	184		
Bartow	4	187		
Suwannee	3	164		
Turner	4	154		
Higgins	4	122		
Avon Park	2	52		
University of Florida	1	35		
Rio Pinar	<u>1</u>	<u>13</u>		
Total Combustion Turbine	47	2,619		
Fotal Units	64			
Fotal Net Generating Capability	••	8,976		
<ol> <li>Adjusted for sale of approximately 8.</li> <li>Includes 143 MW owned by Georgia</li> </ol>	2% of total capacity Power Company (Jun-Sep)			
Purchased Power				
Qualifying Facility Contracts	19	820		
Investor Owned Utilities	2	617		
TOTAL CAPACITY RESOURCES		10,413		

# TABLE 3.2

# PROGRESS ENERGY FLORIDA

# QUALIFYING FACILITY GENERATION CONTRACTS

# AS OF DECEMBER 31, 2005

Facility Name	Firm Capacity (MW)
Bay County Resource Recovery	11.0
Cargill	15.0
Dade County Resource Recovery	43.0
El Dorado	114.2
Jefferson Power	2.0
Lake Cogen	110.0
Lake County Resource Recovery	12.8
LFC Jefferson	8.5
LFC Madison	8.5
Mulberry	79.2
Orange Cogen (CFR-Biogen)	74.0
Orlando Cogen	79.2
Pasco Cogen	109.0
Pasco County Resource Recovery	23.0
Pinellas County Resource Recovery 1	40.0
Pinellas County Resource Recovery 2	14.8
Ridge Generating Station	39.6
Royster	30.8
US Agrichem	5.6
TOTAL	820.2

#### SCHEDULE 7.1 FORECAST OF CAPACITY, DEMAND AND SCHEDULED MAINTENANCE AT TIME OF SUMMER PEAK

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
	TOTAL	FIRM	FIRM		TOTAL	SYSTEM FIRM					
	INSTALLED	CAPACITY	CAPACITY		CAPACITY	SUMMER PEAK	RESER	VE MARGIN	SCHEDULED	RESER	VE MARGIN
	CAPACITY	IMPORT	EXPORT	QF	AVAILABLE	DEMAND	BEFORE N	MAINTENANCE	MAINTENANCE	AFTER M	AINTENANCE
YEAR	MW	MW	MW	MW	МW	MW	MW	% OF PEAK	MW	MW	% OF PEAK
2006	8,843	817	0	813	10,473	8.771	1.702	197c	0	1,702	19%
2007	8,843	1,253	0	802	10,898	9,084	1,814	20%	c	1,814	20%
2008	9,304	1.095	0	798	11,197	9,351	1,846	20%	c	1.846	20%
2009	9,997	1.095	٥	798	11,890	9.554	2.336	24%	٥	2,335	24%
2010	10,136	1.093	o	79 <b>8</b>	12,027	9,931	2.096	21%	٥	2,095	21%
2011	10.614	890	Ð	79 <b>8</b>	12.302	10.135	2.147	21%	0	2.147	21%
2012	10.775	890	Ð	79 <b>8</b>	12,463	10.383	2,080	20%	٥	2,080	20%
2013	11,525	890	O	687	13,102	10.593	2.509	24%	0	2,509	24%
2014	12,275	412	0	500	13.187	10,813	2.374	22%	٥	2.374	22%
2015	12,753	412	0	500	13.565	11.036	2.629	24%	C	2,629	24%

\* Progress Energy is porsuing seasonal purchases of approximately 200 MW in 2005 and 158 MW in 2007. The deals are not yet consummated as of the time of the Ten-Year Site Plan filing. Since the purchase is expected to be from peaking capacity, no energy impact has been included in the plan at this time.

The recently issued Clean Air Interstate Rule (CAIR) may impact PEF's need for new capacity. While a compliance plan has not yet been finalized, some alternatives may impact the capacity of existing and/or future generation resources, resulting in a need for additional capacity. Once the compliance plan has been finalized, PEF will quantify the impacts on generating resources and determine if any additional capacity is needed.

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## SCHEDULE 8 PLANNED AND PROSPECTIVE CENERATING FACILITY ADDITIONS AND CHANGES

#### AS OF JANUARY 1, 2006 THROUGH DECEMBER 31, 2015

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
								CONST.	COM'L IN-	EXPECTED	GEN. MAX.	NET CAPA	BILITY		
	UNIT	LOCATION	UNIT	FI	<u>!EL</u>	<u>FUEL TR</u>	ANSPORT	START	SERVICE	RETIREMENT	NAMEPLATE	SUMMER	WINTER		
PLANT NAME	NO.	(COUNTY)	<u>TYPE</u>	<u>PRL</u>	ALT.	PRL	ALT.	<u>MO. / YR</u>	<u>MQ, / YR</u>	MO. / YR	KW	MW	MW	STATUS	<u>NOTES</u>
HINES ENERGY COMPLEX	4	POLK	22	NG	DFO	PL	тк	12/2005	12/2007			461	517	Ľ	
BARTOW CT	5.6	PINELLAS	ст	NG	DFO	PL	тк	12/2006	12/2008			322	382	P	(1)
CRYSTAL RIVER	5	CITRUS	ST	BIT		WA			04/2009			(22)	(22)	Ρ	(2)
BARTOW CC	1	PINELLAS	сс	NG	DFO	PL	WA.	12/2006	06/2009			837	897	Ρ	(1)
BARTOW	1-3	PINELLAS	ST	RFO		WA				06/2009		(444)	(452)	P	(1)
CRYSTAL RIVER	4	CITRUS	SŢ	BIT		WA			11/2009			(22)	(22)	P	(2)
COMBUSTION TURBINE	1	UNKNOWN	GT	NG	DFO	PL.	ŤK	06/2009	06/2010			161	191	P	
COMBINED CYCLE	1	UNKNOWN	сс	NG	DFO	PL	ΤK	01/2009	06/2011			478	550	P	
COMBUSTION TURBINE	2	UNKNOWN	GT	NG	DFO	PL	тк	06/2011	06/2012			161	191	Ρ	
P-COAL. Supercritical	1	UNKNOWN	ST	віт		RR		06/2008	06/2013			750	750	P	
P-COAL. Supercritical	2	UNKNOWN	ST	BIT	••	RR		06/2009	06/2014			750	750	P	
COMBINED CYCLE	2	UNKNOWN	сс	NG	DFO	PL	TK	01/2013	06/2015			478	550	P	

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 As part of the Bartow Repowering Project: two CTs will go into service 12/2008. In June of 2009, they will be combined with an additional two CTs, four HRSGs, and one steam turbine to produce a single, 444x1 combined cycle with a total summer capacity of 1.159 MW.

(2) Derations due to FDG scrubber installations.

DOCKET NO. 070052- EI EXTRACT FROM PEF 2007 TYSP FIPUG EXHIBIT

ID # 22

# Progress Energy Florida Ten-Year Site Plan

April 2007

2007-2016

Submitted to: Florida Public Service Commission



DOCUMENT NUMBER DATE 02809 APR-25 FPSC-COMMISSION CLERT

SCHEDULE 1 EXISTING GENERATING FACILITIES

AS OF DECEMBER 31, 2006

(1)	(2)	(3)	(4)	(5)	(5)	(7)	(8)	(9)	(10) COM'L IN-	(11) EXPECTED	(12) GEN. MAX.	(13) <u>NET CAI</u>	(14) PABILITY
	UNIT	LOCATION	UNIT	7	ΈL	FLEL TR.	ANSPORT	ALT. FUEL	SERVICE	RETIREMENT	NAMEPLATE	SUMMER	WINTER
PLANT NAME	<u>NO.</u>	(COUNTY)	TYPE	PRL	ALT.	PRI.	ALT.	DAYS USE	MO./YEAR	MO/YEAR	KW	MW	MW
STEAM													
ANCLOTE	1	PASCO	ST	RFO	NG	PL	PC,		10/74		556,200	498	522
ANCLOTE	2	PASCO	ST	RFO	NG	PL	PL.		10/78		556,200	507	526
BARTOW	1	PINELLAS	ST	RFO		WA			09/58		127,500	121	125
BARTOW	2	PINELLAS	ST	RFO		WA			08/61		127,500	119	124
BARTOW	3	PINELLAS	ST	RFO	NG	WA	PL		07/63		239,360	204	215
CRYSTAL RIVER	1	CITRUS	ST	вп		RR	WA		10/65		440,550	379	386
CRYSTAL RIVER	2	CITRUS	ST	ВΠ		RR	WA		11/69		523,800	491	496
CRYSTAL RIVER	3 •	CITRUS	ST	NUC		TK.			03/77		890,460	769	788
CRYSTAL RIVER	4	CITRUS	ST	вп		WA	RR		12/82		739,260	722	734
CRYSTAL RIVER	5	CITRUS	ST	ВП		WA	RR		10/84		739,260	721	734
SUWANNEE RIVER	1	SUWANNEE	ST	RFO	NG	TK/RR	PL.		11/53		34,500	30	33
SUWANNÉE RIVER	2	SUWANNEE	ST	RFO	NG	TK/RR	PL		11/54		37,500	31	31
SUWANNEE RIVER	3	SUWANNEE	ST	RFO	NG	TK/RR	PL		10/56		75,000	<u>80</u>	82
												4,672	4,796
COMBINED-CYCLE													
HINES ENERGY COMPLEX	1	POLK	сс	NG	DFO	PL	TK	2***	04/99		546,500	463	528
HINES ENERGY COMPLEX	2	POLK	CC	NG	DFO	PL	TK	-	12/03		548,250	490	562
HINES ENERGY COMPLEX	3	POLK	cc	NG	DFO	PL	TK		11/05		\$61,000	503	570
TIGER BAY	1	POLK	cc	NG		PL	.,.		08/97		278,100	203	225
• <b>•</b> ••									••••			1.659	1,885
COMBUSTION TURBINE													1,002
AVON PARK	P1	HIGHLANDS	GT	NG	DFO	PL	TK	3=##	12/58		33,790	25	34
AVON PARK	P2	HIGHLANDS	GT	DFO		TK		-	12/68		33,790	25	36
BARTOW	P1, P3	PINELLAS	GT	DFO		WA			05/72, 06/72		111,400	86	112
BARTOW	PZ	PINELLAS	GT	NG	DFO	PL.	WA	8	06/72		55,700	44	56
BARTOW	P4	PINELLAS	GT	NG	DFO	PL	WA	8	06/72		55,700	46	58
BAYBORO	P1-P4	PINELLAS	GT	DFO		WA		-	04/73		225,800	177	232
DEBARY	P1-P6	VOLUSIA	GT	DFD		TK			12/75-04/76		401,220	311	393
DEBARY	P7-P9	VOLUSIA	GT	NG	DFO	PL	TK	8	10/92		345,000	249	287
DEBARY	P10	VOLUSIA	GT	DFO		тк		•	10/92		115,000	83	99
HIGGINS	P1-P2	PINELLAS	GT	NG	DFO	PL	TK		03/69, 04/69		67,580	53	68
HIGGINS	P3-P4	PINELLAS	GT	NG	DFO	PL	TK	1	12/70,01/71		85,850	57	65
INTERCESSION CITY	P1-P6	OSCEOLA	GT	DFO		PL.TK		•	05/74		340,200	282	369
INTERCESSION CITY	P7-P10	OSCEOLA	GT	NG	DFO	PL	PLTK	5	10/93		460,000	332	376
INTERCESSION CITY	P11 **	OSCEOLA	GT	DFO		PL.TK	1	5	01/97		165,000	143	161
INTERCESSION CITY	P12-P14	OSCEOLA	GT	NG	DFO	PL.	PLTK	5	12/00		345,000	235	278
RIO PINAR	P1	ORANGE	GT	DFO		TK		-	11/70		19,290	13	16
SUWANNEE RIVER	P1. P3	SUWANNEE	GT	NG	DFO	PL	TK		10/80, 11/80		122,400	:06	133
SUWANNEE RIVER	P2	SUWANNEE	GT.	DFO	210	TK		,	10/80		61,200	51	66
TURNER	P1-P2	VOLUSIA	GT	DFO		тк			10/70		38,580	22	32
TURNER	P3	VOLUSIA	GT	DFO		тк			03/74		71,200	64	85
TURNER	P4	VOLUSIA	GT	DFO		TK			03/74		71,200	64 64	84
UNIV. OF FLA.	P1	ALACHUA	GT	NG		PL			01/94				• •
on or real		AUTOR	51			15			VI/34		43,000	<u>45</u>	<u>47</u> 2 087
· REPRESENTS APPROXIMATELY 91.81	INT ONATO	UID OF LOUT										2,513	3,087
* SUMMER CAPABILITY JUNE THROUGH				~~~~~	,					TOTAL	ounces a ma		0.4/8
SUMMER CAPABILITY OUNE THROUG	IN PERIEMBER	GOWNED BT GEORG	UN FUWER	UMI AN						TOTAL RES	SOURCES (MW)	8,844	9,768

\*\*\* FOR ENTIRE FLANT

 $\cdots \cdot p_1$  requires a 3-4 day outage in order to switch between NG & dfo

## SCHEDULE 2.1 HISTORY AND FORECAST OF ENERGY CONSUMPTION AND NUMBER OF CUSTOMERS BY CUSTOMER CLASS

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)		
		RURAL	. AND RESI	DENTIAL			COMMERC	IAL		
YEAR	PEF POPULATION	MEMBERS PER HOUSEHOLD	GWh	AVERAGE NO. OF CUSTOMERS	AVERAGE KWE CONSUMPTION PER CUSTOMER	GWh	AVERAGE NO. OF CUSTOMERS	AVERAGE KWh CONSUMPTION PER CUSTOMER		
1997	2,878,315	2.480 2.487	15,080	1,160,611	12,993	9,257	132,504	69,862		
1998 1999	2,941,589 3,028,821	2.487	16,526 16,245	1,182,786 1,213,470	13,972 13,387	9,999	136,345	73,336		
2000	3,026,469	2.452	17,116	1,234,286	13,387	10,327 10,813	140,897 143,475	73,295 75,365		
2000	3,122,946	2.450	17,604	1,274,672	13,811	11,061	145,475	75,254		
2002	3,191,315	2.452	18,754	1,301,515	14,409	11,420	150,577	75,842		
2003	3,267,185	2.453	19,429	1,331,914	14,587	11,553	154,294	74,877		
2004	3,348,917	2.454	19,347	1,364,677	14,177	11,734	158,780	73,901		
2005	3,429,664	2.455	19,894	1,397,012	14,240	11,945	161,001	74,192		
200 <del>6</del>	3,512,066	2.453	20,021	1,431,743	13,984	11,975	162,774	73,568		
2007	3,565,718	2.455	20,891	1,452,431	14,383	12,340	167,150	73,826		
2008	3,629,609	2.450	21,457	1,481,473	14,484	12,674	170,889	74,165		
2009	3,694,808	2.447	22,026	1,509,934	14,587	13,009	174,552	74,528		
2010	3,762,611	2.446	22,605	1,538,271	14,695	13,361	178,195	74,980		
2011	3,828,922	2.444	23,192	1,566,662	14,803	13,708	181,846	75,382		
2012	3,895,566	2.442	23,792	1,595,236	14,914	14,056	185,520	75,765		
2013	3,959,232	2.438	24,404	1,623,967	15,027	14,417	189,213	76,195		
2014	4,025,804	2,436	25,027	1,652,629	15,144	14,796	192,896	76,705		
2015	4,091,505	2.434	25,693	1,680,980	15,285	15,202	196,539	77,349		
2016	4,155,712	2.432	26,363	1,708,763	15,428	15,622	200,111	78,067		

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## SCHEDULE 2.2 HISTORY AND FORECAST OF ENERGY CONSUMPTION AND NUMBER OF CUSTOMERS BY CUSTOMER CLASS

(1)	(2)	(3)	(3) (4)		(6)	(7)	(8)
		INDUSTRIAL					
YEAR	GWh	AVERAGE NO. OF CUSTOMERS	AVERAGE KWh CONSUMPTION PER CUSTOMER	RAILROADS AND RAILWAYS GWb	STREET & HIGHWAY LIGHTING GWh	OTHER SALES TO PUBLIC AUTHORITIES GWh	TOTAL SALES TO ULTIMATE CONSUMERS GWh
1997	4,188	2,830	1,479,859	0	27	2,299	30,851
1998	4,375	2,707	1,616,180	0	27	2,459	33,386
1999	4,334	2,629	1,648,536	0	27	2,509	33,442
2000	4,249	2,535	1,676,134	0	28	2,626	34,832
2001	3,872	2,551	1,517,836	0	28	2,698	35,263
2002	3,835	2,535	1,512,821	0	28	2,822	36,859
2003	4,001	2,643	1,513,810	0	29	2,946	37,958
2004	4,069	2,733	1,488,840	0	28	3,016	38,194
2005	4,140	2,703	1,531,632	0	27	3,171	39,177
2006	4,160	2,697	1,542,455	0	27	3,249	39,432
2007	4,155	2,701	1,538,319	0	28	3,353	40 <b>,76</b> 7
2008	4,393	2,701	1,626,435	0	28	3,457	42,009
2009	4,423	2,701	1,637,542	0	28	3,570	43,056
2010	4,451	2,701	1,647,908	0	28	3,682	44,127
2011	4,518	2,701	1,672,714	0	28	3,798	45,244
2012	4,544	2,701	1,682,340	0	28	3,916	46,336
2013	4,571	2,701	1,692,336	0	28	4,038	47,458
2014	4,599	2,701	1,702,703	0	28	4,164	48,614
2015	4,587	2,701	1,698,260	0	28	4,293	49,803
2016	4,587	2,701	1,698,260	0	28	4,427	51,027

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## SCHEDULE 2.3 HISTORY AND FORECAST OF ENERGY CONSUMPTION AND NUMBER OF CUSTOMERS BY CUSTOMER CLASS

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(1)	(2)	(3)	(4)	(5)	(6)
	SALES FOR	UTILITY USE	NET ENERGY	OTHER	TOTAL
	RESALE	& LOSSES	FOR LOAD	CUSTOMERS	NO. OF
YEAR	GWh	GWh	GWh	(AVERAGE NO.)	CUSTOMERS
				••••••	
1 <b>997</b>	1,758	1,996	34,605	18,562	1,314,507
1998	2,340	2,037	37,763	19,013	1,340,851
1999	3,267	2,451	39,160	19,601	1,376,597
2000	3,732	2,678	41,242	20,003	1,400,299
2001	3,839	1,831	40,933	20,752	1,444,958
2002	3,173	2,535	42,567	21,156	1,475,783
2003	3,359	2,594	43,911	21,665	1,510,516
2004	4,301	2,773	45,268	22,437	1,548,627
2005	5,195	2,506	46,878	22,701	1,583,417
2006	4,220	2,389	46,041	23,182	1,620,396
2007	4,524	2,905	48,194	23,687	1,645,969
2008	4,501	2,958	49,468	24,280	1,679,343
2009	4,527	3,026	50,609	24,877	1,712,064
2010	5,238	3,151	52,516	25,474	1,744,641
2011	5,363	3,169	53,776	26,071	1,777,280
2012	5,437	3,244	55,017	26,669	1,810,126
2013	5,542	3,321	56,321	27,266	1,843,147
2014	5,673	3,445	57,732	27,864	1,876,090
2015	5,795	3,476	59,074	28,460	1,908,680
2016	5,873	3,560	60,460	29,058	1,940,633

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#### SCHEDULE 3.1.1 HISTORY AND FORECAST OF SUMMER PEAK DEMAND (MW) BASE CASE

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(OTH)	(10)
					RESIDENTIAL		COMM. / IND.		OTHER	
					LOAD	RESIDENTIAL	LOAD	COMM. / IND.	DEMAND	NET FIRM
YEAR	TOTAL	WHOLESALE	RETAIL	INTERRUPTIBLE	MANAGEMENT	CONSERVATION	MANAGEMENT	CONSERVATION	REDUCTIONS	DEMAND
19 <b>97</b>	7,786	874	6,912	288	555	78				<i>.</i>
1998	8,367	943					41	124	170	6,53)
			7,424	291	438	97	42	134	182	7,183
1999	9,039	1,326	7,713	292	505	113	45	145	183	7,756
2000	8,902	1,319	7,583	277	455	127	48	146	75	7,774
2001	8,832	1,117	7,715	283	414	139	48	147	75	7.726
2002	9,412	1,203	8,209	305	390	153	43	150	75	8,296
2003	8,877	887	7,990	300	393	172	44	154	75	7,738
2004	9,578	1,071	8,507	531	355	188	39	155	110	8,200
2005	10,345	1,118	9,227	448	343	206	38	158	110	9,041
2006	10,186	1,257	8,929	329	319	226	37	161	110	9,003
2007	10,658	1,321	9,337	449	319	243	43	168	110	9.327
2008	10,927	1,337	9,590	473	332	259	52	177	[10	9,525
2009	11,010	1,192	9,818	474	351	275	61	185	110	9,553
2010	11,318	1,269	10,049	479	372	292	70	194	110	9.801
2011	11,569	1,287	10,282	484	393	308	80	203	110	9,992
2012	11,807	1,296	10,511	485	414	325	89	211	110	10,173
2013	12,062	1,320	10,742	486	427	342	98	220	110	10,379
2014	12,437	1,469	10,968	483	438	360	107	229	110	10,711
2015	12.671	1,483	11,188	478	441	367	110	232	110	10,932
2016	12,906	1,499	11,407	477	441	367	110	232	110	11,169

Historical Values (1997 - 2006):

Col. (2) = recorded peak + implemented load control + residential and commercial/industrial conservation and customer-owned self-service cogeneration.

Cols. (5) - (9) = Represent total cumulative capabilities at peak. Col. (8) includes commercial load management and standoy generation.

Col. (OTH) =Customer-owned self-service cogeneration.

Col.  $(10) = (2) \cdot (5) \cdot (6) \cdot (7) \cdot (8) \cdot (9) \cdot (OTH).$ 

Projected Values (2007 - 2016):

Cols. (2) - (4) = forecasted peak without load control, conservation, and customer-owned self-service cogeneration.

Cols. (5) - (9) = cumulative conservation and load control capabilities at peak. Col. (8) includes commercial load management and standby generation.

Col. (OTH) = customer-owned self-service cogeneration.

 $Col. (10) = (2) \cdot (5) \cdot (6) \cdot (7) \cdot (8) - (9) \cdot (OTH).$ 

## SCHEDULE 3.3.1 HISTORY AND FORECAST OF ANNUAL NET ENERGY FOR LOAD (GWb) BASE CASE

(1)	(2)	(3)	(4)	(OTH)	(5)	(6)	(7)	(8)	(9)
YEAR	TOTAL		COMM. / IND. CONSERVATION	OTHER ENERGY REDUCTIONS*	RETAIL	WHOLESALE	UTILITY USE & LOSSES	NET ENERGY FOR LOAD	LOAD FACTOR (%) **
1997	35,752	268	317	562	30,850	1,758	1,997	34,605	49.0
1998	38,949	289	333	564	33,387	2,340	2,036	37,763	53.9
1999	40.375	312	339	564	33,441	3,267	2,452	39,160	50.0
2000	42,486	334	345	565	34,832	3,732	2,678	41,242	50.5
2001	42,200	354	349	564	35,263	3,839	1,831	•	47.5
2002	43,860	377	352	564	36,859	3,173	2,535	42,567	50.0
2003	45,232	400	357	564	37,957	3,359	2,595	43,911	47.7
2004	46,835	427	360	780	38,193	4,301	2,774	45,268	56.5
2005	48,479	460	363	779	39,177	5,195	2,506	46,878	52.3
2006	47,680	495	365	779	39,432	4,220	2,389	45,041	52.1
2007	49,878	522	383	779	40,766	4,524	2,904	48,194	56.7
2008	51,201	552	401	780	42,009	4,501	2,958	49,468	56.6
2009	52,389	582	419	779	43,055	4,527	3,027	50,609	57.6
2010	54,344	612	437	779	44,127	5,238	3,151	52,516	57.3
2011	55,652	642	455	<b>7</b> 7 <b>9</b>	45,243	5,363	3,170	53,776	57.5
2012	56,942	672	473	780	46,337	5,437	3,243	55,017	57.0
2013	58,293	702	491	779	47,457	5,542	3,322	56,321	57.0
2014	59,752	732	509	779	48,614	5,673	3,445	57,732	57.3
2015	61,094	732	509	779	49,802	5,795	3,477	59,074	57.4
2016	62,481	732	509	780	51,027	5,873	3,560	60,460	57.2

 Column (OTH) includes Conservation Energy For Lighting and Public Authority Customers, Customer-Owned Self-service Cogeneration and Load Control Programs.

Load Factors for historical years are calculated using the actual winter peak demand except the 1998 and 2004 historical load factors which are based on the actual summer peak demand.
 Load Factors for future years are calculated using the net firm winter peak demand (Schedule 3.2.1)

## SCHEDULE 4 PREVIOUS YEAR ACTUAL AND TWO-YEAR FORECAST OF PEAK DEMAND AND NET ENERGY FOR LOAD BY MONTH

(1)	(2)	(3)	(4)	(5)	(6)	(7)		
	ACTU	A L	FORECA	AST	FORECAST			
	2006		2007		2008			
	PEAK DEMAND	NEL	PEAK DEMAND	NEL	PEAK DEMAND	NEL		
MONTH	MW	GWh	MW	GWh	MW	GWh		
JANUARY	7,870	3,390	9,705	3,772	9,943	3,914		
FEBRUARY	10,095	3,191	7,862	3,257	8,014	3,383		
MARCH	6,441	3,286	6,692	3,509	6,863	3,631		
APRIL	7,837	3,582	7,387	3,498	7,540	3,576		
MAY	8,382	4,020	8,482	4,271	8,672	4,361		
JUNE	9,349	4,401	8,905	4,478	9.071	4,574		
JULY	9,462	4,699	9,156	4,867	9,337	4,985		
AUGUST	9,689	4,920	9,327	4,919	9,525	5,047		
SEPTEMBER	8,794	4,270	8,553	4,434	8,729	4,537		
OCTOBER	8,286	3,763	7,975	3,982	8.202	4,076		
NOVEMBER	6,415	3,192	6,463	3,426	6,569	3,502		
DECEMBER	6,792	3,327	7,529	3,781	7,717	3,882		
TOTAL	-	46,041		48,194		49,468		

NOTE: "Actual" = "Total" - "Interruptible" - "Res. LM" - "C/I LM" - "Voltage Reduction & Standby Generation"

## <u>CHAPTER 3</u> FORECAST OF FACILITIES REQUIREMENTS

## RESOURCE PLANNING FORECAST OVERVIEW OF CURRENT FORECAST

## Supply-Side Resources

PEF has a summer total capacity resource of 10,752 MW, as shown in Table 3.1. This capacity resource includes nuclear (769 MW), fossil steam (3,903MW), combined cycle plants (1,659 MW), combustion turbine (2,513 MW, 143 MW of which is owned by Georgia Power for the months June through September), utility purchased power (484 MW), independent power purchases (611 MW), and non-utility purchased power (813 MW). Table 3.2 shows PEF's contracts for firm capacity provided by Qualifying Facilities (QF's).

## **Demand-Side** Programs

Total DSM resources are shown in Schedules 3.1.1 and 3.2.1 of Chapter 2. These programs include Non-Dispatchable DSM, Interruptible Load, and Dispatchable Load Control resources. PEF's 2007 Ten-Year Site Plan Demand-Side Management projections are consistent with the DSM Goals established by the Commission in Docket No. 040031-EG.

## Capacity and Demand Forecast

PEF's forecasts of capacity and demand for the projected summer and winter peaks are shown in Schedules 7.1 and 7.2, respectively. PEF's forecasts of capacity and demand are based on serving expected growth in retail requirements in its regulated service area and meeting commitments to wholesale power customers who have entered into supply contracts with PEF. In its planning process, PEF balances its supply plan for the needs of retail and wholesale customers and endeavors to ensure that cost-effective resources are available to meet the needs across the customer base. Over the years, as wholesale markets have grown more competitive, PEF has remained active in the competitive solicitations while planning in a manner that maintains an appropriate balance of commitments and resources within the overall regulated supply framework.

## Base Expansion Plan

PEF's planned supply resource additions and changes are shown in Schedule 8 and are referred to as PEF's Base Expansion Plan. This Plan includes a net gain in summer capacity of 3,575 MWs through the summer of 2016. As identified in Schedule 8, PEF's next planned unit is the Hines 4 Unit, a 461 MW (summer) power block with a December 2007 in-service date. PEF's self-build option for Hines Unit 4 was determined to be the most cost-effective alternative, followed by the Bartow Repowering Project to be completed by June 2009.

PEF's Base Expansion Plan projects the need for additional units with proposed in-service dates from 2007 through 2016. These units, together with the OUC purchase (December 2006 – February 2007), the Central Power & Lime purchase (December 2005 - December 2010), the Reliant/Osceola purchase (January 2007 - February 2009), the TEA purchase (from January 2007 - February 2007, and June 2007 - September 2007), purchases currently under negotiation for the summers of 2007 and 2008, the Shady Hills Purchase (April 2007 - April 2024), and the Southern Company Purchase (June 2010 - December 2017) help the PEF system meet the growing energy requirements of its customer base. Additionally, some undesignated seasonal purchases for 2007 and 2008 are projected as well to meet requirements. Some of the identified unit additions may be impacted by PEF's ability to extend or replace existing purchase power contracts, as well as contracts with cogenerators and QF's. Status reports and specifications for new generation facilities are included in Schedule 9. Shown in Schedule 10 are the new transmission lines associated with Hines #4 and the Bartow Repowering Project.

Current planning studies identify gas-fired units as the most economic alternatives for system expansion in the near term. New nuclear technologies appear to offer more favorable long-term economics, and provide favorable environmental characteristics, measured against possible emission limits imposed by the recently issued Clean Air Interstate Rule (CAIR). PEF is currently evaluating the nuclear option with the intent of pursuing preliminary licensing activities for the addition of new nuclear capacity in 2016. In the years prior to the addition of new nuclear capacity, PEF also is investigating the possibility of coal gasification as a fuel source for one of the combined cycle facilities listed in the resource plan.

## TABLE 3.1

## PROGRESS ENERGY FLORIDA

## TOTAL CAPACITY RESOURCES OF POWER PLANTS AND PURCHASED POWER CONTRACTS

## AS OF DECEMBER 31, 2006

PLANTS	NUMBER OF UNITS	SUMMER NET DEPENDABLE CAPABILITY (MW)	
Nuclear Steam			
Crystal River	1	<u>769</u> (1)	
Total Nuclear Steam	$\frac{1}{1}$	769	
Fossil Steam			
Crystal River	4	2,313	
Anclote	2	1,005	
Bartow	3	444	
Suwannee River	3	141	
Total Fossil Steam	<u>3</u> 12	3,903	
Combined Cycle			
Hines Energy Complex	3	1,456	
Tiger Bay	1	203	
Total Combined cycle	$\frac{1}{4}$	1,659	
Combustion Turbine			
DeBary	10	643	
Intercession City	14	992 (2)	
Bayboro	4	177	
Bartow	4	176	
Suwannee	3	157	
Turner	4	150	
Higgins	4	110	
Avon Park	2	50	
University of Florida	1	45	
Rio Pinar	<u>1</u>	13	
Total Combustion Turbine	47	2,513	
Total Units	64		
Total Net Generating Capability		8,844	
<ol> <li>Adjusted for sale of approximately 8.</li> <li>Includes 143 MW owned by Georgia</li> </ol>	2% of total capacity Power Company (Jun-Sep)		
Purchased Power			
Qualifying Facility Contracts	19	813	
Investor Owned Utilities	2	484	
Independent Power Producers	2	611	
FOTAL CAPACITY RESOURCES		10,752	

3-3

## SCHEDULE 7.1 FORECAST OF CAPACITY, DEMAND AND SCHEDULED MAINTENANCE AT TIME OF SUMMER PEAK

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
	TOTAL	FIRM	FIRM		TOTAL	SYSTEM FIRM					
	INSTALLED	CAPACITY	CAPACITY		CAPACITY	SUMMER PEAK	RESER	VE MARCIN	SCHEDULED	RESERV	E MARGIN
	CAPACITY	IMPORT	EXPORT	QF	AVAILABLE	DEMAND	BEFORE N	AINTENANCE	MAINTENANCE	AFTER M	AINTENANCE
YEAR	MW	MW	MW	MW	MW	MW	MW	% OF PEAK	MW	MW	% OF PEAK
2007	8.701	1.561	• 0	\$03	11.165	9,327	1.838	20%	0	1,838	20%
2008	9,175	1,503	• 0	799	11,477	9.525	1.952	20%	0	1,952	20%
2009	9,881	1,095	0	659	11,635	9,553	2,082	22%	0	2.062	22%
2010	9,891	1,253	٥	775	11,919	9,801	2.118	22%	0	2,118	22%
2011	9,926	1,370	D	775	12,071	9,992	2,079	21%	D	2,079	21%
2012	10.077	1,530	0	775	12,382	10,173	2,209	22%	o	2,209	22%
2013	10,614	1,530	D	665	12,809	10,379	2,430	23%	9	2,430	23%
2014	11.151	1,530	0	478	13,159	10,711	2,448	23%	0	2,448	23%
2013	11,151	1,530	0	478	13,159	10.933	2,225	20%	0	2.226	20%
2016	12,276	1.459	٥	478	14.213	11.169	3,044	27%	ð	3.044	27%
									-		

\* Progress Energy is pursuing summer seasonal purchases of approximately 200 MW in 2007 and 250 MW in 2008. The deals are not yet consummated as of the time of the Ten-Yeat Site Plan filling. Since the purchase is expected to be from peaking capacity, no energy impact has been included in the plan at this time.

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#### SCHEDULE 8 PLANNED AND PROSPECTIVE GENERATING FACILITY ADDITIONS AND CHANGES

AS OF JANUARY 1, 2006 THROUGH DECEMBER 31, 2016

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
								CONST.	COM'L IN-	EXPECTED	GEN. MAX.	NET CAP	BILITY		
	UNIT	LOCATION	UNIT	EL	EL	FUEL TRA	ANSPORT	START	SERVICE	RETIREMENT	NAMEPLATE	SUMMER	WINTER		
PLANT NAME	<u>NQ.</u>	(COUNTY)	TYPE	PRI.	ALT.	PRI	ALT.	<u>MO. / YR</u>	MO. / YR	MQ. / YR	XW	MW	MW	STATUS	NOTES
HINES	1	POLK	CC						12/2007			1	1	A	(3)
HINES	4	POLK	сс	NG	DFO	PL	TK	12/2005	12/2007			461	517	v	(1)
HINES	1	POLK	СС						05/2008			2	2	A	(3)
TIGER BAY	1	POLK	CC						05/2008			10	10	A	(3)
CRYSTAL RIVER	4	CITRUS	ST						11/2008			10	10	A	(3)
CRYSTAL RIVER	5	CITRUS	ST						04/2009			(30)	(30)	D	(2)
CRYSTAL RIVER	5	CITRUS	57						05/2009			10	10	A	(3)
BARTOW	1-3	PINELLAS	ST							06/2009		(444)	(464)	RP	(4)
BARTOW	1	PINELLAS	сс	NG	DFO	PL	WA	12/2006	06/2009			1159	1279	RP	(4)
CRYSTAL RIVER	3	CITRUS	ST						12/2009			40	40	A	(3)
CRYSTAL RIVER	4	CITRUS	ST						04/2010			(30)	(30)	D	(2)
HINES	1	POLK	cc						06/2011			35	0	A	(3)
CRYSTAL RIVER	3	CITRUS	ST						12/2011			140	140	A	(3)
CRYSTAL RIVER	1	CITRUS	ST						03/2012			11	11	A	(3)
UNCOMMITTED	1	UNKNOWN	сс	NG	DFO	PL	тк	06/2010	06/2013			537	618	P	(1)
UNCOMMITTED	2	UNKNOWN	сс	NG	DFO	PL	TK	06/2011	05/2014			537	618	P	(1)
UNCOMMITTED	3	UNKNOWN	NP	NUC		RR		01/2010	05/2015			1125	1125	P	(1)

NOTES

Committed naw unit.
 Committed naw unit.
 Planned derations due to FGD scrubber installations.
 Planned uprates.
 Repowering

EXHIBIT NO.

DOCKET NO:	070052-EI
WITNESS:	VARIOUS
PARTY:	PROGRESS ENERGY FLORIDA, INC.
DESCRIPTION:	STAFF'S EXHIBIT
DOCUMENTS:	

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Progress Energy Florida's response to Staff Interrogatory (No. 5) in Docket Number 060642, Crystal River.

PROFFERED BY: STAFF

FLORIDA PUBLIC SERVICE COMMISSION DOCKET NO. 070052-EFEXHIBIT 22 COMPANY F75C Staff WITNESS PEFResponse to Staph Int. No. 5 DATE  $\mathcal{O}$ 08/07 74

- 5. Please provide a detailed breakdown of the \$2,664,166,852 fuel savings value contained in Exhibit SSW-2 to Witness Waters' September 22, 2006, prefiled direct testimony as follows:
  - a. Differential energy generated for each capacity type (steam-coal, steam-oil/gas, steam-combined cycle, combustion turbine, nuclear, cogen, purchased power, and any others); and
  - b. Differential dollar value and energy generated for each individual generating unit.
  - a. Please see Attachment 1. The data presented in Attachment 1 is through 2025 only (please see the answer to Interrogatory No. 4). The annual savings shown in Attachment 1 sum to the total \$1,444,373,714.
  - b. Please see Attachment 2.

Progress Energy Florida Docket No. 060642-EI Response to Staff Interrogatory No. 5 Attachment 1 ,

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#### GWH

Uprate minus Base

StationGroup	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	
Cogen	(1.1)	0,0	(0.9)	(2.8)	0.5	(1.8)	(1.5)	(2.8)	(1.4)	(8.6)	(15.0)	(10.1)	(10.2)	(14.0)	(18.7)	(15.5)	(13.9)	
ст	(0.1)	(6.2)	(7.7)	(41.0)	(20.6)	(30,5)	(35.2)	(20.2)	(39.0)	(18.5)	(21.9)	(32.1)	(43.1)	(12.6)	(20.2)	(20.5)	(31.8)	
DSM	0.0	(0.2)	(0.2)	(0.5)	(0.6)	(0.5)	(1.4)	(0.3)	(1.3)	(0.0)	(0.0)	(1.7)	0,0	0.0	(0.4)	0.0	(0.6)	
Nuclear	11.2	339,9	415.9	1533.8	1416.6	1529.6	1416.6	1533.8	1402.2	1493.3	1389.8	1506.3	1387.9	1457.7	1345.8	1459.3	1380.2	
Steam-CC	(10.5)	(231.6)	(310.6)	(929.9)	(923.6)	(910,1)	(847.6)	(950.0)	(811.3)	(884.7)	(873.2)	(927.6)	(703.3)	(890.5)	(816.2)	(848.6)	(828.2)	
Steam-Coal	1.3	(36,9)	(32.7)	(192.4)	(240.8)	(358.6)	(344.9)	(378.0)	(370.5)	(505.1)	(385.3)	(417.1)	(467.4)	(458.4)	(403.8)	(472.9)	(368.6)	
Steam-Oli	1.5	(32.2)	(19.7)	(201.9)	(88.4)	(125.6)	(80.6)	(76.4)	(91.0)	(82.5)	(66.9)	(79.9)	(124.8)	(51.0)	(46.5)	(58.8)	(86.9)	
Purc(Econ+Firm+E.N.S)	(2.2)	(32.9)	(44,6)	(163.7)	(143.6)	(99.0)	(104.7)	(103,7)	(86.5)	(6.6)	(20.4)	(20.2)	(21.6)	(11.0)	(14.4)	(15.5)	(22.8)	
TranEcon-Sale + Dump	(0.0)	(0.0)	0.5	(1.5)	0.5	(3.6)	(0.6)	(2.4)	(1.3)	(7.4)	(7.1)	(17.7)	(17.7)	(20.3)	(25.8)	(27.5)	(27.3)	
No Uprate - July GFF Base																		
StationGroup	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	
Cogen	4,551.4	5,312.2	5,314.6	5,332.9	5,314.2	5,311.6	5,309.4	5,328.0	5,312.4	5,296.0	5,295.9	5,308.2	5,296.8	5,282.6	5,275.8	5,280.5	5,276.6	
СТ	1,670.5	1,596.4	1,674.7	1,611.7	1,580.3	1,568.5	1,665.1	1,550.5	1,691.5	1,580.3	1,560.5	1.641.6	1,661.5	1,534,8	1,542.4	1,564.6	1,631.9	
DSM	5.6	4.4	4.7	0.5	2.6	0.7	3.3	0.3	3.8	0.0	0.0	8.9	3.7		0,8	0.7	2.7	
Nuclear	5,089,1	6,636.4	8,143,5	6,654,5	6,143.1	6,636.4	6,143.9	6,654.5	6,735.7	14,796.3	14,304.9	14,842.5	14,956.2	22,754.3	22,307.5	22,843.7	22,341.6	
Steam-CC	15,223.5	15,820,7	18,609,3	20,158.4	19,112.3	17,745.6	18,355.5	16,255.4	17,358.2	13,389,4	15,057.4	15,478.8	16,200,9	12,830.4	13,666.3	14,098.3	15,487,9	
Steam-Coal	15,260.6	16,168.3	16,620.9	15,801.8	19,418.7	21,400.0	22,395.4	28,363.4	25,975.8	24,692.4	24,770.6	24,902.4	25,266.8	22,857.7	23,545.6	23,898.4	23,942.7	
Steam-Oil	3,611.7	2,940.7	3,021.7	3,099.0	2,678.0	2,895.3	2,857.8	2,740.1	2,924.3	2,685.7	2,761,1	2,856.7	2,958.3	2,523,4	2,687.9	2,628.4	2,827.6	
Purc(Econ+Firm+E.N.S)	5,777.2	4,688.2	2,775.7	2,776.2	2,516.9	2,371.8	2,510.5	1,705.2	1,875.4	798.8	814.6	855.0	867.0	793.2	804,7	812.5	835.7	
TranEcon-Sale   Dump	(389.6)	(386.3)	(387.5)	(385.8)	(386.2)	(390.9)	(391.1)	(389.7)	(388.1)	(403.8)	(403.0)	(402.4)	(410,6)	(453.3)	(431.0)	(443.0)	(442.0)	
Uprate - CR3 180MWs Study																		
StationGroup	2009	2010	2011	2012	2013	2014	<u>2015</u>	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	
Cogeri	4,550.3	5,312.2	5,313.7	5,330.1	5,314.7	5,309.8	5,307.9	5,325.2	5,310.9	5,287.4	5,280.9	5,298.1	5,286.6	5,248.5	5,257.2	5,265.0	5,262.7	
ст	1,670.4	1,590.2	1,667.0	1,570.8	1,559.7	1,538.0	1,629.9	1,530.3	1,652.4	1,561.8	1,538.6	1,609.5	1,618.5	1,522,3	1,522.1	1,544.1	1,600.1	
DSM	5,6	4.2	4.4	0.0	2.1	0.2	1.9	0,1	2,5	0.0	•	7.2	3,7	•	0.5	0.7	2.1	
Nuclear	5,100.3	6,976.3	6,559.4	8,188.3	7,559.7	8,166.0	7,560.5	8,188.3	8,137,9	16,289.6	15,694.7	16,348.8	16,344.1	24,212.0	23,653.3	24,303.0	23,701.7	
Steam-CC	15,212.9	15,589,1	18,298,7	19,228.4	18,188.7	16,835.5	17,507.9	15,305.4	16,544.8	12,504.7	14,184.1	14,551.1	15,497.6	11,939.9	12,850.1	13,249.8	14,859.7	
Steam-Coal	15,261.9	16,131.5	16,588.2	15,609.4	19,177.9	21,041.4	22,050.4	25,985.4	25,605.3	24,187.3	24,385.3	24,485.2	24,799,5	22,399.4	23,144.7	23,423.5	23,574.1	
Steam-Oil	3,613.2	2,908.4	3,002.0	2,897.0	2,589.6	2,769.8	2,777.2	2,663.7	2,833.3	2,823.1	2,694.1	2,776.8	2,833.5	2,472,4	2,641.4	2,569.6	2,760.7	
Purc(Econ+Firm+E.N.S)	5,775.0	4,655.3	2,731.1	2,612.5	2,373.3	2,272.9	2,405.8	1,601.4	1,788.9	792.2	794.2	834.8	845.5	782.2	790.3	797.0	812.9	
TranEcon-Sale + Dump	(389.7)	(386.4)	(387.1)	(387,3)	(385,7)	(394.5)	(391.7)	(392.1)	(389.4)	(411.0)	(410.1)	(420.1)	(428.3)	(473.6)	(456.6)	(470.4)	(469.3)	

Progress Energy Florida Docket No. 060642-E1 Response to Staff Interrogatory No. 5 Attachment 2 Page 1 of 14 .

## PEF CR3 Uprate

Uprate minus Base

GWh

ANNUAL																	
CR NUC 3	<u>2009</u> 11	<u>2010</u> 340	<u>2011</u> 416	<u>2012</u> 1,534	<u>2013</u> 1,417	<u>2014</u> 1,530	<u>2015</u> 1,417	<u>2016</u> 1,534	<u>2017</u> 1,404	<u>2018</u> 1,530	<u>2019</u> 1,41	<u>2020</u> 1,534	<u>2021</u> 1,417	<u>2022</u> 1,530	<u>2023</u> 1,417	<u>2024</u> 1,534	<u>2025</u> 1,417
NUC Future 1	0	0	0	0	0	0	0		•		7						
NUC Future 2	õ	ŏ	0	0	0	0	0	0 0	-2	-36	-27	-27	-25	-28	-32	-33	-25
Nuclear, Total	11	340	416	1,534	1,417	1,530	1,417	-	0	0	0	0	-4	-44	-39	-41	-31
				1100.	11911	1,000	1.417	1,534	<u>1,402</u>	1,493	<u>1,39</u> 0	1,506	<u>1,388</u>	<u>1,458</u>	<u>1,346</u>	1,459	1,360
Steam-Coal	Ō	<u>0</u>	<u>0</u>	Q	Q	<u>0</u>	Õ	<u>0</u>	0	õ	õ	<u>0</u>	<u>0</u>	Q	<u>0</u>	<u>0</u>	<u>0</u>
Crystal 1	1	-9	-9	-51	-44	-59	-57	-45	-46	-53	-46	-52	-49	-50	-48	-47	-42
Crystal 2	0	-15	-10	-52	-73	-71	-76	-59	-56	-67	-49	-53	-53	-62	-51	-60	-46
Crystal 4	0	-7	-7	-40	-62	-83	-81	-82	-85	-96	-66	-75	-98	-82	-74	-87	-70
Crystal 5	1	-6	-6	-49	-54	-85	-76	-83	-89	-95	-67	-76	-95	-81	-76	-83	-64
PV COAL 1	0	0	0	0	-8	-60	-49	-51	-46	-92	-75	-82	-81	-93	-78	-90	-72
PV COAL 2	0	0	0	0	0	0	-7	-57	-48	-102	-82	-79	-92	-91	-77	-105	-75
Steam-Coal, Total	1	<u>-37</u>	<u>-33</u>	<u>-192</u>	-241	-359	-345	-378	-370	-505	<u>-385</u>	-417	-467	-458	-404	-473	-369
<u>Steam-Oil</u>	<u>o</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	Q	0	0	Q	0	0	0	0	0	0	Q
Anclote 1	0	-14	-11	-94	-27	-51	-40	-23	-34	-45	-35	-49	-46	-26	-33	-31	-32
Anclote 2	2	-16	-4	-94	-34	-53	-31	-45	-45	-15	-28	-28	-68	-23	-9	-28	-30
BARTOW 1	· 0	0	0	0	0	0	0	Ó	0	0	0	0	0	0	Õ	0	0
BARTOW 2	0	0	0	.0	0	0	0	0	Ó	0	Ó	0	Ó	Ō	Ō	Ō	Ó
BARTOW 3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SUWANNEE 1	0	-1	Q	-3	-4	-6	-5	-2	-1	0	-1	-1	-2	1	-3	1	-1
SUWANNEE 2	0	0	1	-2	-3	-4	-2	-6	-3	-1	0	-1	-1	0	-4	-2	-1
SUWANNEE 3	0	-1	-5	-10	-20	-12	-3	-1	-7	-2	-3	0	-7	-2	2	2	-2
Steam-Oil, Total	2	<u>-32</u>	<u>-20</u>	<u>-202</u>	<u>-88</u>	<u>-126</u>	<u>-81</u>	<u>-76</u>	<u>-91</u>	<u>-63</u>	<u>-67</u>	<u>-80</u>	<u>-125</u>	<u>-51</u>	<u>-46</u>	<u>-59</u>	-67
Steam-CC	Q	Q	<u>0</u>	<u>0</u>	Q	Q	<u>0</u>	Q	<u>0</u>	Q	<u>0</u>	<u>o</u>	<u>0</u>	õ	<u>0</u>	<u>o</u>	<u>o</u>
BARTOW CC REP	-21	-24	-110	-496	-346	-322	-374	-260	-230	-237	-218	-226	-213	-201	-259	-243	-184
1																	474
CCF 1	0	0	-66	-119	-143	-134	-148	-144	-156	-189	-158	-194	-126	-192	-103	-176	-171 -96
HINES 1	-2	-15	17	-77	-32	-38	-52	-38	-51	-17	-29	-54	-34	-48	-88	-51 -90	-96 -98
HINES 2	-4	-19	-80	-89	-156	-112	-94	-63	-197	-148	-81	-142	-77	-100	-130 -109	-141	-90
HINES 3	-5	-32	-26	-91	-141	-133	-92	-145	-101	-103	-137	-97	-118	-155	-109	-141	-146
HINES 4	18	-117	-71	-66	-52	-138	-104	-232	-26	-98	-201	-144	-100	-190 -4	-114 -12	-122	-140
TIGERBAY 1	3	-24	25	8	-53	-33	16	-67	-50	-92	-50	-70	-34	,		-849	- <u>828</u>
Steam-CC, Total	<u>-11</u>	<u>-232</u>	<u>-311</u>	<u>-930</u>	<u>-924</u>	<u>-910</u>	<u>-848</u>	-950	<u>-811</u>	<u>-885</u>	-873	<u>-928</u>	<u>-703</u>	-890	-816		
<u>CT, Total</u>	<u>0</u>	<u>-6</u>	<u>-8</u>	<u>-41</u>	<u>-21</u>	<u>-30</u>	<u>-35</u>	<u>-20</u>	<u>-39</u>	<u>-18</u>	-22	<u>-32</u>	<u>-43</u>	<u>-13</u>	<u>-20</u>	<u>-21</u>	<u>-32</u> -23
Tran-Purc, Total	-2	<u>-33</u>	<u>-8</u> -45 -1 0	<u>-164</u>	<u>-144</u>	<u>-99</u>	<u>-105</u>	<u>-104</u>	-86	<u>-18</u> -7 -9 -7	-22 -20 -15 -7	<u>-32</u> -20 -10	-22	-11	-14	-16	-40
Cogen, Total	-1	Õ	<u>-1</u>	-3	<u>0</u>	<u>-2</u>	<u>-1</u>	<u>-3</u>	-1	<u>-9</u>	<u>-15</u>	<u>-10</u>	<u>-10</u>	<u>-14</u>	<u>-19</u>	<u>-15</u> -27	<u>-14</u> -27
Sales	0	0		-1	1	-4	-1	-2	-1			-18	-18	-20	-26		-27
DSM	0	0	0	0	-1	0	-1	0	-1	0	0	-2	0	0	0	0	-1
Total Load	<u>0</u>	<u>0</u>	<u>0</u>	õ	Ō	Q	Q	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	Ō

Progress Energy Florida Docket No. 060642-EI Response to Staff Interrogatory No. 5 Attachment 2 Page 2 of 14

PEF CR3 Uprate July 2006 Generation & Fuel Forecast - Florida GWh

ANNUAL																	
	2009	<u>2010</u>	2011	2012	<u>2013</u>	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
CR NUC 3	5.089	6,636	6,143	6,655	6,143	6,636	6 4 4 4	0.055									
NUC Future 1	0,000	0,000	0,140	0,000	0,145	0,000	6,144	6,655	6,089 646	6,636 8,160	6,143 8,162	6,655 8,188	6,144 8,169	6,636	6,143	6,655	6,143
NUC Future 2									040	0,100	0,102	0,100	643	8,095 8,023	8,116 8,048	8,133 8,056	8,130 8,068
Nuclear, Total	5,089	6,636	6,143	6,655	6,143	6,636	6,144	6,655	6,736	14,796	14,305	14,842	14,956	22,754	22,308	22,844	22,342
Steam-Coal																	
Crystal 1	2,500	2,395	2,679	2,404	2,257	2,461	2,364	2,240	2,404	2,031	2,110	2,210	2,133	1,789	0.404	4 0.94	2,071
Crystal 2	2,870	3,069	2,892	2,709	3,117	2,851	2,863	2,810	2,404	2,446	2,624	2,210	2,155	2,417	2,101 2,379	1,984 2,366	2,563
Crystal 4	5,309	5,553	5,398	5,386	5,310	5,125	5,449	4,894	4,643	4,723	4,549	4,597	4,873	4,236	4,365	4,604	4,413
Crystal 5 PV COAL 1	4,581	5,151	5,652	5,303	5,237	5,053	5,370	4,811	4,570	4,639	4,472	4,515	4,800	4,184	4,261	4,527	4,325
PV COAL 2					3,498	5,910	5,883 467	5,846 5,763	5,829 5,771	5,461 5,393	5,551 5,465	5,571 5,474	5,603 5,489	5,166 5,066	5,271 5,171	5,257 5,158	5,338 5,232
Steam-Coal, Total	15,261	16,168	16,621	15,802	19,419	21,400	22,395	26,363	25,976	24,692	24,771	24,902	25,267	22,858	23,549	23,896	23,943
Steam-Oil Anclote 1	1,451	1,503	1,574	1,569	1,289	1,457	4 45 4	4 004	4 450	4 200	1 201	1 466	1 170	1 007	4 209	1 2 4 9	1 400
Anclote 2	1,084	1,114	1,095	1,169	1,035	1,457	1,454 1,051	1,381 1,040	1,456 1,118	1,368 1,003	1,391 1,040	1,466 1,046	1,479 1,137	1,237 974	1,368 1,007	1,348 939	1,423 1,074
BARTOW 1	195	.,	1,000	1,100	1,000	1,001	1,001	1,040	1,110	1,000	1,040	1,040	1,101	014	1,007	500	1,014
BARTOW 2	179																
BARTOW 3	327																70
SUWANNEE 1 SUWANNEE 2	88 102	81 93	89	85 98	82 96	86 96	82 98	76 94	80 100	76 89	81 90	82 98	82 95	77 88	77 86	78 96	79 92
SUWANNEE 3	102	93 150	101 164	178	176	166	173	94 149	170	149	159	165	165	148	149	168	160
Steam-Oil, Total	3,612	2,941	3,022	3,099	2,678	2,895	2,858	2,740	2,924	2,686	2,761	2,857	2,958	2,523	2,688	2,628	2,828
<u>Steam-CC</u> BARTOW CC REP	3,441	5,094	6,077	6,195	5,413	4,864	5,017	4,184	4,556	3,006	3,569	3,643	3,899	2,827	3,080	3,236	3,551
1	3,441	5,094	0,011	0,195	5,415	4,004	5,017	4,104	4,556	3,000	3,303	5,045	5,635	2,027	5,000	0,200	0,001
CCF 1			1,576	2,724	2,621	2,369	2,414	2,077	2,276	1,641	1,878	1,971	2,023	1,530	1,611	1,693	1,873
HINES 1	2,851	3,142	2,886	3,094	3,244	3,080	3,075	2,968	3,232	2,794	2,913	2,816	2,891 2,173	2,764 1,738	2,833 1,850	2,959 1,946	3,020 2,147
HINES 2	2,644	2,251	2,424	2,369 2,039	2,300 2,139	2,105 2,179	2,309 2,196	2,114 1,945	2,220 2,134	1,837 1,641	1,866 1,976	2,132 1,972	2,173	1,738	1,850	1,841	2,026
HINES 3 HINES 4	2,399 2,699	2,137 2,144	2,151 2,542	2,528	2,135	2,173	2,130	1,945	2,130	1,488	1,863	1,836	2,070	1,519	1,588	1,590	1,859
TIGERBAY 1	1,190	1,052	954	1,210	1,247	1,016	1,166	1,022	808	981	992	1,108	1,054	872	980	833	1,013
Steam-CC, Total	15,223	15,821	18,609	20,158	19,112	17,746	18,355	16,255	17,356	<u>13,389</u>	15,057	15,479	16,201	12,830	13,666	14,098	<u>15,488</u>
07																	
AVON PK 1	13	12	13	12	13	12	12	12	13	12	12	13	12	12	12	12	13
AVON PK 2	3	4	4	3	3	3	3	3	4	3	3	4	3	3	3	3	3
BARTOW 1	2	1	1	0	. 1	0	1	0	1	0	0	1	1	0	0	0	1 3
BARTOW 2	9	3	4	2.	2	1	3	1	4	2	- 1 D	3	2	0	0	0	1
BARTOW 3	2	1	1	0	1	0 2	2	1	1	2	1	3	3	2	1	1	3
BARTOW 4	7	4	5 12	11	10	10	11	10	12	10	10	11	11	10	10	10	11
BAYBORO 1 BAYBORO 2	11	12	12	11	11	11	12	11	12	11	10	12	11	11	10	11	11
BAYBORO 3	13	13	14	13	12	12	13	12	14	12	12	14	12	12	12 12	12 12	13 13
BAYBORO 4	13	13	14	13	13	12	13	12	14	12	12	13	13	12	12	12	15
CTBar 1	39				*												
CTBar 2 CTFG 1	31	19	39	35	20	25	34	10	39	19	19	34	38	10	12	16	29
CTFG 2		14	27	25	16	14	28	12	28	16	12	28	29	9	11	15	23

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#### PEF CR3 Uprate July 2006 Generation & Fuel Forecast - Florida GWh

ANNOAL																	
	2009	2010	<u>2011</u>	<u>2012</u>	<u>2013</u>	2014	<u>2015</u>	2016	2017	<u>2018</u>	<u>2019</u>	2020	2021	2022	2023	2024	2025
CTFG 3		9	23	17	10	40		_									
CTFG 4		5	25	3	9	13 9	21	9	20	9	10	20	20	6	9	9	18
DEBARY 1	10	10	10	9	9	9	14	7	14	9	5	8	14	6	6	7	14
DEBARY 2	8	8	9	8	8	8	9 8	9 8	10	9	9	10	9	9	9	9	10
DEBARY 3	9	ğ	9	8	8	8	9	+	9	8	7	9	8	7	8	8	8
DEBARY 4	9	9	ş	8	8	8	9	8 8	9	8	8	10	8	8	8	8	9
DEBARY 5	8	8	8	7	ě.	7	8	7	9 8	8	8 7	9	8	8	8	8	9
DEBARY 6	7	7	8	7	7	7	7	7	о 8	8 7	7	9	8 7	7	7	7 7	8 7
DEBARY 7	90	90	91	88	89	89	90	89	92	88	88	9 88	90	83	89	88	7 89
DEBARY 8	91	90	94	90	90	90	91	90	91	90	89	91	90 91	88	90	89	90
DEBARY 9	88	86	88	86	86	86	88	78	87	85	85	86	86	85	84	85	85
DEBARY 10	29	30	30	29	29	29	29	29	30	29	29	30	29	29	29	29	29
HIGGINS 1	8	8	8	8	8	8	8	8	8	8	8	8	8	. 8	8	8	8
HIGGINS 2	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8
HIGGINS 3	15	14	14	14	14	14	14	14	14	14	14	15	14	14	14	14	14
HIGGINS 4	11	11	11	11	11	11	11	11	11	11	10	11	11	10	10	11	11
INT CITY 1	9	9	9	8	8	8	8	8	9	8	8	9	8	8	8	8	8
INT CITY 2	12	12	12	12	12	11	11	11	12	11	11	12	11	11	11	11	12
INT CITY 3	12	12	12	12	12	11	12	11	13	11	11	13	12	11	11	11	12
INT CITY 4	13	13	14	13	13	13	13	13	14	13	13	13	13	13	13	13	13
INT CITY 5	14	14	15	14	14	13	14	13	15	13	13	15	14	13	13	13	14
INT CITY 6	10	10	10	10	9	9	10	9	11	9	9	10	10	9	9	9	10
INT CITY 7	65	63	65	62	63	62	63	62	64	62	58	64	63	62	62	61	63
INT CITY 8	70	70	72	68	69	68	69	68	67	68	67	70	70	68 58	67	67 57	69 60
INT CITY 9	63	59	63	59	58	58	60	59	61	57	57	60	60 64	58 63	58	57 63	64
INT CITY 10	65	64	67	64	63 30	63	64	64	66	63	63	65 32	64 30	29	63 29	29	30
INT CITY 11	30	30 90	32 90	30 90	88	30 86	29 89	29 88	31 89	29 87	28 87	32 90	90	29 <sup>.</sup> 87	29 87	2.9 87	89
INT CITY 12	91 90	90 90	90 90	90 87	85	80 87	88	88 86	89 89	87	86	88	90 89	86	87	86	87
INT CITY 13 INT CITY 14	90	90 91	90 93	90	89	89	90	90	91	89	89	91	90	88	89	89	89
RIO PINAR 1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
SUWANNEE 1	35	33	34	35	33	33	34	32	34	30	31	32	33	29	32	31	33
SUWANNEE 2	20	20	22	20	19	19	20	20	21	19	19	21	20	19	19	19	20
SUWANNEE 3	43	40	39	43	40	38	43	39	39	36	37	37	41	33	37	36	39
TURNER 1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
TURNER 2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
TURNER 3	13	13	15	13	12	12	13	12	13	13	12	14	13	12	12	12	13
TURNER 4	10	11	12	10	10	10	10	10	11	10	10	11	10	9	9	10	10
U OF FL 1	363	346	339	340	347	338	364	348	364	361	362	336	361	357	341	358	358
CT, Total	<u>1,671</u>	1,596	1,675	<u>1,612</u>	1,580	<u>1,568</u>	1,665	1,550	<u>1,691</u>	<u>1,580</u>	<u>1,561</u>	<u>1,642</u>	1,662	<u>1,535</u>	1,542	1,565	1,632
C P & Lime	988	989												220	220	332	332
Econpurc offp	332	332	332	332	332	332	332	332	332	332	332	332	332	332 421	332 421	332 421	421
Econpurc peak	422	422	422	421	421	421	421	421	421	421	421	423	421	421	421	421	42.1
Osceola 158 Purc	3																
OUC 150 Purc						-					04	99	113	40	51	59	82
Shady Hills	89	120	121	153	84	70	139	56	133	45	61	99	115		51	00	
SoCo Franklin		742	1,294	1,315 ·	1,134	1,020	1,088	896	988								
SoCo Scherer		330	557	554	545	529	530										
Southern UPS	3,567	1,456															
TEA 50 Purc																	

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#### PEF CR3 Uprate July 2006 Generation & Fuel Forecast – Florida GWh

ANNUAL

	2009	<u>2010</u>	<u>2011</u>	<u>2012</u>	<u>2013</u>	2014	2015	2016	2017	<u>2018</u>	2019	2020	<u>2021</u>	2022	2023	<u>2024</u>	2025
Teco Purc	376	295	50														
Tran-Purc, Total	5,777	4,688	2,776	<u>2,776</u>	<u>2,517</u>	<u>2,372</u>	<u>2,511</u>	1,705	<u>1,875</u>	<u>799</u>	<u>815</u>	<u>855</u>	<u>867</u>	<u>793</u>	<u>805</u>	<u>812</u>	<u>836</u>
As Avail	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27
Auburn(As Avail) Bay County	37	38	37	38	38	38	38	38	38	37	38	38	37	38	37	37	37
Biomass Energy Cargill	68	828	830	832	829	828	828	831	828	821	820	821	822	807	812	810	814
Dade County	312	313	313	314	313	312	312	314	312	311	311	312	311	307	308	308	308
DTE Biomass	21	21	21	22	21	21	21	21	21	21	21	21	21	21	21	21	21
El Dorado (APP)	475	474	473	477	475	473	473	476	474	474	474	476	475	474	474	476	474
G2 Energy	77	77	77	78	77	77	77	77	77	76	77	76	76	75	76	76	76
Lake Cogen	433	433	433	436	433	433	433	433	434	433	433	434	433	432	433	435	434
Lake County	80	80	80	80	80	80	80	80	80	79	79	80	79	79	79	79	. 79
LFC (APP)	82	81	82	82	81	81	81	82	81	82	82	82	81	81	81	82	81
Mulberry	383	383	383	384	383	383	383	384	383	383	383	384	383	383	383	384	383
Orange Cogen	378	378	378	379	378	378	378	379	378	378	378	379	378	378	378	379	378
Orlando Cogen	647	647	647	649	647	647	647	649	647	647	647	649	647	647	647	649	647
Pasco Cogen	629	628	629	631	628	629	629	631	629	628	629	630	629	629	628	630	628
Pasco County	173	173	173	174	173	173	173	173	173	172	171	172	171	168	169	169	169
Pinellas County	336	336	336	337	336	336	336	337	336	334	334	334	334	327	330	328	330
Ridge Gen St	246	246	246	247	246	246	245	246	245	244	244	244	244	241	242	242	242
Royster	149	149	149	149	149	149	149	149	149	149	149	149	149	149	149	149	149
Cogen, Total	<u>4,551</u>	5,312	<u>5,315</u>	<u>5,333</u>	<u>5,314</u>	<u>5,312</u>	<u>5,309</u>	<u>5,328</u>	<u>5,312</u>	<u>5,296</u>	5,296	5,308	<u>5,297</u>	<u>5,263</u>	5,276	<u>5,281</u>	<u>5,277</u>
Sales	-390	-386	-388	-386	-386	-391	-391	-390	-388	-404	-403	-402	-411	-453	-431	-443	-442
DSM	6	4	5	0	3	1	3	0	4	0	0	9	4	0	1	1	3
Total Load	<u>50,800</u>	<u>52,781</u>	53,777	55,049	56,380	<u>57,539</u>	<u>58,850</u>	<u>60,208</u>	<u>61,487</u>	<u>62,835</u>	<u>64,162</u>	<u>65,492</u>	<u>66,801</u>	<u>68,103</u>	<u>69,403</u>	<u>70,682</u>	<u>71,905</u>

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PEF CR3 Uprate CR3 Uprate (180MW full ownership, July 06 GFF base) – Florida <sup>GWh</sup>

ANNUAL																	
· · · · · · · · ·	<u>2009</u>	2010	<u>2011</u>	<u>2012</u>	<u>2013</u>	<u>2014</u>	<u>2015</u>	<u>2016</u>	<u>2017</u>	2018	<u>2019</u>	<u>2020</u>	<u>2021</u>	<u>2022</u>	2023	2024	2025
CR NUC 3 NUC Future 1 NUC Future 2	5,100	6,976	6,559	8,188	7,560	8,166	7,560	8,188	7,494 644	8,166 8,124	7,560 8,135	8,188 8,160	7,561 8,144	8,166 8,067	7,560 8,084	8,188 8,100	7,560 8,105
Nuclear, Total	<u>5,100</u>	<u>6,976</u>	<u>6,559</u>	<u>8,188</u>	<u>7,560</u>	<u>8,166</u>	<u>7,560</u>	<u>8,188</u>	<u>8,138</u>	<u>16,290</u>	<u>15,695</u>	16,349	639 <u>16,344</u>	7,979 <u>24,212</u>	8,009 <u>23,653</u>	8,015 <u>24,303</u>	8,036 <u>23,702</u>
Steam-Coal																	
Crystal 1	2,501	2,386	2,670	2,353	2,213	2,402	2,307	2,195	2,358	1,978	2,065	2.158	2.084	1,739	2,052	1,937	2.029
Crystal 2	2,870	3,054	2,881	2,656	3,044	2,780	2,788	2,751	2,702	2,379	2,575	2,482	2,315	2,355	2,002	2,305	2,025
Crystal 4	5,309	5,547	5,390	5,346	5,248	5,041	5,368	4,812	4,558	4,627	4,482	4,522	4,776	4,155	4,291	4,517	4.343
Crystal 5	4,582	5,145	5,646	5,254	5,183	4,968	5,294	4,728	4,481	4,543	4,405	4,439	4,706	4,103	4,185	4,445	4,261
PV COAL 1					3,490	5,849	5,835	5,794	5,783	5,369	5,475	5,489	5,522	5,073	5,193	5,167	5,267
PV COAL 2 Steam-Coal, Total	45 000	40.404	40 500		40.470	·	459	5,705	5,723	5,291	5,383	5,395	5,397	4,975	5,094	5,053	5,157
Steam-Coal, Total	<u>15,262</u>	<u>16,131</u>	16,588	<u>15,609</u>	<u>19,178</u>	21,041	<u>22,050</u>	<u>25,985</u>	<u>25,605</u>	24,187	24,385	24,485	24,799	22,399	23,145	<u>23,423</u>	23,574
Steam-Oil																	
Anclote 1	1.450	1,488	1,563	1,475	1,261	1,407	1,414	1,358	1,422	1,323	1,356	1,417	1,433	1.211	1,336	1,317	1,390
Anclote 2	1,086	1,099	1,090	1,075	1,001	1.038	1.021	995	1,072	988	1.012	1,018	1,069	950	998	911	1,044
BARTOW 1	195				,		.,				.,	.,	1,000			••••	.,
BARTOW 2	179																
BARTOW 3	327																
SUWANNEE 1	88	80	88	82	79	80	77	74	79	76	80	81	80	77	74	79	78
SUWANNEE 1 SUWANNEE 2	88 102	92	101	96	92	92	96	88	97	88	89	96	94	88	82	94	91
SUWANNEE 1 SUWANNEE 2 SUWANNEE 3	88 102 184	92 150	101 158	96 169	92 157	92 154	96 170	88 148	97 163	88 148	89 157	96 165	94 158	88 146	82 151	94 169	91 157
SUWANNEE 1 SUWANNEE 2	88 102	92	101	96	92	92	96	88	97	88	89	96	94	88	82	94	91
SUWANNEE 1 SUWANNEE 2 SUWANNEE 3 <u>Steam-Oil, Total</u>	88 102 184	92 150	101 158	96 169	92 157	92 154	96 170	88 148	97 163	88 148	89 157	96 165	94 158	88 146	82 151	94 169	91 157
SUWANNEE 1 SUWANNEE 2 SUWANNEE 3 <u>Steam-Oil, Total</u> <u>Steam-CC</u> BARTOW CC REP	88 102 184	92 150	101 158	96 169	92 157	92 154	96 170	88 148	97 163	88 148	89 157	96 165	94 158	88 146	82 151	94 169	91 157
SUWANNEE 1 SUWANNEE 2 SUWANNEE 3 <u>Steam-Oil, Total</u> <u>Steam-CC</u> BARTOW CC REP 1	88 102 184 <u>3,613</u>	92 150 <u>2,908</u>	101 158 <u>3,002</u> 5,967	96 169 <u>2,897</u> 5,699	92 157 <u>2,590</u> 5,067	92 154 <u>2,770</u> 4,543	96 170 <u>2,777</u> 4,643	88 148 <u>2,664</u> 3,923	97 163 <u>2,833</u> 4,326	88 148 <u>2,623</u> 2,769	89 157 <u>2,694</u> 3,351	96 165 <u>2,777</u> 3,418	94 158 <u>2,834</u> 3,686	88 146 <u>2,472</u> 2,627	82 151 <u>2,641</u> 2,821	94 169 <u>2,570</u>	91 157 <u>2,761</u>
SUWANNEE 1 SUWANNEE 2 SUWANNEE 3 <u>Steam-Oil, Total</u> <u>Steam-CC</u> BARTOW CC REP 1 CCF 1	88 102 184 <u>3,613</u> 3,421	92 150 <u>2,908</u> 5,070	101 158 <u>3,002</u> 5,967 1,510	96 169 <u>2,897</u> 5,699 2,605	92 157 <u>2,590</u> 5,067 2,477	92 154 <u>2,770</u> 4,543 2,235	96 170 <u>2,777</u> 4,643 2,267	88 148 <u>2,664</u> 3,923 1,933	97 163 <u>2,833</u> 4,326 2,120	88 148 <u>2,623</u> 2,769 1,453	89 157 <u>2,694</u> 3,351 1,720	96 165 <u>2,777</u> 3,418 1,777	94 158 <u>2,834</u>	88 146 <u>2,472</u>	82 151 <u>2,641</u>	94 169 <u>2,570</u> 2,993	91 157 <u>2,761</u> 3,366
SUWANNEE 1 SUWANNEE 2 SUWANNEE 3 <u>Steam-Oil, Total</u> <u>Steam-CC</u> BARTOW CC REP 1 CCF 1 HINES 1	88 102 184 <u>3,613</u> 3,421 2,849	92 150 <u>2,908</u> 5,070 3,127	101 158 <u>3,002</u> 5,967 1,510 2,903	96 169 <u>2,897</u> 5,699 2,605 3,017	92 157 <u>2,590</u> 5,067 2,477 3,212	92 154 <u>2,770</u> 4,543 2,235 3,043	96 170 <u>2,777</u> 4,643 2,267 3,023	88 148 <u>2,664</u> 3,923 1,933 2,930	97 163 <u>2,833</u> 4,326 2,120 3,181	88 148 <u>2,623</u> 2,769	89 157 <u>2,694</u> 3,351	96 165 <u>2,777</u> 3,418 1,777 2,762	94 158 <u>2,834</u> 3,686 1,897	88 146 <u>2,472</u> 2,627 1,338	82 151 <u>2,641</u> 2,821 1,508	94 169 <u>2,570</u> 2,993 1,517	91 157 <u>2,761</u> 3,366 1,702
SUWANNEE 1 SUWANNEE 2 SUWANNEE 3 <u>Steam-Oil, Total</u> <u>Steam-CC</u> BARTOW CC REP 1 CCF 1 HINES 1 HINES 2	88 102 184 <u>3,613</u> 3,421 2,849 2,640	92 150 <u>2,908</u> 5,070 3,127 2,232	101 158 <u>3,002</u> 5,967 1,510 2,903 2,344	96 169 <u>2,897</u> 5,699 2,605 3,017 2,280	92 157 <u>2,590</u> 5,067 2,477 3,212 2,144	92 154 <u>2,770</u> 4,543 2,235 3,043 1,993	96 170 <u>2,777</u> 4,643 2,267 3,023 2,214	88 148 <u>2,664</u> 3,923 1,933 2,930 2,051	97 163 <u>2,833</u> 4,326 2,120 3,181 2,023	88 148 <u>2,623</u> 2,769 1,453 2,777 1,689	89 157 <u>2,694</u> 3,351 1,720 2,884	96 165 <u>2,777</u> 3,418 1,777	94 158 <u>2,834</u> 3,686 1,897 2,857	88 146 <u>2,472</u> 2,627 1,338 2,716	82 151 <u>2,641</u> 2,821 1,508 2,745	94 169 <u>2,570</u> 2,993 1,517 2,908	91 157 <u>2,761</u> 3,366 1,702 2,924
SUWANNEE 1 SUWANNEE 2 SUWANNEE 3 <u>Steam-Oil, Total</u> <u>Steam-CC</u> BARTOW CC REP 1 CCF 1 HINES 1 HINES 1 HINES 2 HINES 3	88 102 184 <u>3,613</u> 3,421 2,849 2,640 2,394	92 150 <u>2,908</u> 5,070 3,127 2,232 2,106	101 158 <u>3,002</u> 5,967 1,510 2,903 2,344 2,125	96 169 <u>2,897</u> 5,699 2,605 3,017 2,280 1,947	92 157 <u>2,590</u> 5,067 2,477 3,212	92 154 <u>2,770</u> 4,543 2,235 3,043	96 170 <u>2,777</u> 4,643 2,267 3,023	88 148 <u>2,664</u> 3,923 1,933 2,930	97 163 <u>2,833</u> 4,326 2,120 3,181	88 148 2,623 2,769 1,453 2,777	89 157 <u>2,694</u> 3,351 1,720 2,884 1,785	96 165 <u>2,777</u> 3,418 1,777 2,762 1,990	94 158 <u>2,834</u> 3,686 1,897 2,857 2,096	88 146 <u>2,472</u> 2,627 1,338 2,716 1,638 1,424	82 151 <u>2,641</u> 2,821 1,508 2,745 1,719	94 169 <u>2,570</u> 2,993 1,517 2,908 1,856	91 157 <u>2,761</u> 3,366 1,702 2,924 2,049 1,913 1,713
SUWANNEE 1 SUWANNEE 2 SUWANNEE 3 <u>Steam-Oil, Total</u> <u>Steam-CC</u> BARTOW CC REP 1 CCF 1 HINES 1 HINES 1 HINES 2 HINES 3 HINES 4	88 102 184 <u>3,613</u> 3,421 2,849 2,640 2,394 2,717	92 150 2,908 5,070 3,127 2,232 2,106 2,027	101 158 <u>3,002</u> 5,967 1,510 2,903 2,344	96 169 <u>2,897</u> 5,699 2,605 3,017 2,280	92 157 <u>2,590</u> 5,067 2,477 3,212 2,144 1,998	92 154 2,770 4,543 2,235 3,043 1,993 2,046	96 170 <u>2,777</u> 4,643 2,267 3,023 2,214 2,104	88 148 <u>2,664</u> 3,923 1,933 2,930 2,051 1,800	97 163 <u>2,833</u> 4,326 2,120 3,181 2,023 2,033	88 148 2,623 2,769 1,453 2,777 1,689 1,538	89 157 <u>2,694</u> 3,351 1,720 2,884 1,785 1,839	96 165 <u>2,777</u> 3,418 1,777 2,762 1,990 1,875	94 158 2,834 3,686 1,897 2,857 2,096 1,972 1,970 1,020	88 146 <u>2,472</u> 2,627 1,338 2,716 1,638 1,424 1,329 868	82 151 2,641 2,821 1,508 2,745 1,719 1,616 1,474 968	94 169 2,570 2,993 1,517 2,908 1,856 1,701 1,468 807	91 157 <u>2,761</u> 3,366 1,702 2,924 2,049 1,913 1,713 992
SUWANNEE 1 SUWANNEE 2 SUWANNEE 3 <u>Steam-Oil, Total</u> <u>Steam-CC</u> BARTOW CC REP 1 CCF 1 HINES 1 HINES 1 HINES 2 HINES 3	88 102 184 <u>3,613</u> 3,421 2,849 2,640 2,394	92 150 <u>2,908</u> 5,070 3,127 2,232 2,106	101 158 <u>3,002</u> 5,967 1,510 2,903 2,344 2,125 2,471	96 169 2,897 5,699 2,605 3,017 2,280 1,947 2,462	92 157 2,590 5,067 2,477 3,212 2,144 1,998 2,097	92 154 2,770 4,543 2,235 3,043 1,993 2,046 1,993	96 170 2,777 4,643 2,267 3,023 2,214 2,104 2,075	88 148 2,664 3,923 1,933 2,930 2,051 1,800 1,713	97 163 2,833 4,326 2,120 3,181 2,023 2,033 2,104	88 148 <u>2,623</u> 2,769 1,453 2,777 1,689 1,538 1,390	89 157 <u>2,694</u> 3,351 1,720 2,884 1,785 1,839 1,662	96 165 2,777 3,418 1,777 2,762 1,990 1,875 1,692	94 158 2,834 3,686 1,897 2,857 2,096 1,972 1,970	88 146 <u>2,472</u> 2,627 1,338 2,716 1,638 1,424 1,329	82 151 2,641 2,821 1,508 2,745 1,719 1,616 1,474	94 169 <u>2,570</u> 2,993 1,517 2,908 1,856 1,701 1,468	91 157 <u>2,761</u> 3,366 1,702 2,924 2,049 1,913 1,713
SUWANNEE 1 SUWANNEE 2 SUWANNEE 3 <u>Steam-Oil, Total</u> <u>Steam-CC</u> BARTOW CC REP 1 CCF 1 HINES 1 HINES 1 HINES 2 HINES 3 HINES 4 TIGERBAY 1 <u>Steam-CC, Total</u>	88 102 184 <u>3,613</u> 3,421 2,849 2,640 2,394 2,717 1,193	92 150 2,908 5,070 3,127 2,232 2,106 2,027 1,028	101 158 <u>3,002</u> 5,967 1,510 2,903 2,344 2,125 2,471 979	96 169 2,897 5,699 2,605 3,017 2,280 1,947 2,462 1,218	92 157 2,590 5,067 2,477 3,212 2,144 1,998 2,097 1,193	92 154 2,770 4,543 2,235 3,043 1,993 2,046 1,993 983	96 170 2,777 4,643 2,267 3,023 2,214 2,104 2,075 1,182	88 148 2,664 3,923 1,933 2,930 2,051 1,800 1,713 955	97 163 <u>2,833</u> 4,326 2,120 3,181 2,023 2,033 2,104 758	88 148 2,623 2,769 1,453 2,777 1,689 1,538 1,390 889	89 157 <u>2,694</u> 3,351 1,720 2,884 1,785 1,839 1,662 943	96 165 2,777 3,418 1,777 2,762 1,990 1,875 1,692 1,038	94 158 2,834 3,686 1,897 2,857 2,096 1,972 1,970 1,020	88 146 <u>2,472</u> 2,627 1,338 2,716 1,638 1,424 1,329 868	82 151 2,641 2,821 1,508 2,745 1,719 1,616 1,474 968	94 169 2,570 2,993 1,517 2,908 1,856 1,701 1,468 807	91 157 <u>2,761</u> 3,366 1,702 2,924 2,049 1,913 1,713 992
SUWANNEE 1 SUWANNEE 2 SUWANNEE 3 <u>Steam-Oil, Total</u> <u>Steam-CC</u> BARTOW CC REP 1 CCF 1 HINES 1 HINES 2 HINES 3 HINES 4 TIGERBAY 1 <u>Steam-CC, Total</u> <u>CT</u>	88 102 184 3,613 3,421 2,849 2,640 2,394 2,717 1,193 15,213	92 150 2,908 5,070 3,127 2,232 2,106 2,027 1,028 15,589	101 158 <u>3,002</u> 5,967 1,510 2,903 2,344 2,125 2,471 979 <u>18,299</u>	96 169 <u>2,897</u> 5,699 2,605 3,017 2,280 1,947 2,462 1,218 <u>19,228</u>	92 157 2,590 5,067 2,477 3,212 2,144 1,998 2,097 1,193 18,189	92 154 2,770 4,543 2,235 3,043 1,993 2,046 1,993 983 16,836	96 170 2,777 4,643 2,267 3,023 2,214 2,104 2,075 1,182 17,508	88 148 2,664 3,923 1,933 2,930 2,051 1,800 1,713 955 15,305	97 163 <u>2,833</u> 4,326 2,120 3,181 2,023 2,033 2,033 2,104 758 <u>16,545</u>	88 148 2,623 2,769 1,453 2,777 1,689 1,538 1,538 1,390 889 12,505	89 157 <u>2,694</u> 3,351 1,720 2,884 1,785 1,839 1,662 943 14,184	96 165 2,777 3,418 1,777 2,762 1,990 1,875 1,692 1,038 14,551	94 158 <u>2,834</u> 3,686 1,897 2,857 2,096 1,972 1,970 1,020 15,498	88 146 2,472 2,627 1,338 2,716 1,638 1,424 1,329 868 11,940	82 151 2,641 2,821 1,508 2,745 1,719 1,616 1,474 968 12,850	94 169 2,570 2,993 1,517 2,908 1,856 1,701 1,468 807 13,250	91 157 2.761 3,366 1,702 2,924 2,049 1,913 1,913 1,713 992 14,660
SUWANNEE 1 SUWANNEE 2 SUWANNEE 3 <u>Steam-Oil, Total</u> <u>Steam-CC</u> BARTOW CC REP 1 CCF 1 HINES 1 HINES 1 HINES 2 HINES 2 HINES 3 HINES 4 TIGERBAY 1 <u>Steam-CC, Total</u> <u>CT</u> AVON PK 1	88 102 184 3,613 3,421 2,849 2,640 2,394 2,717 1,193 15,213	92 150 2,908 5,070 3,127 2,232 2,106 2,027 1,028 15,589	101 158 <u>3,002</u> 5,967 1,510 2,903 2,344 2,125 2,471 979 <u>18,299</u> 18,299	96 169 <u>2,897</u> 5,699 2,605 3,017 2,280 1,947 2,462 1,218 <u>19,228</u>	92 157 2,590 5,067 2,477 3,212 2,144 1,998 2,097 1,193 18,189	92 154 2,770 4,543 2,235 3,043 1,993 2,046 1,993 983 16,836	96 170 2,777 4,643 2,267 3,023 2,214 2,104 2,075 1,182 17,508	88 148 2,664 3,923 1,933 2,930 2,051 1,800 1,713 955 15,305	97 163 <u>2,833</u> 4,326 2,120 3,181 2,023 2,033 2,104 758 16,545	88 148 <u>2,623</u> 2,769 1,453 2,777 1,689 1,538 1,538 1,390 889 12,505	89 157 <u>2,694</u> 3,351 1,720 2,884 1,785 1,839 1,662 943 <u>14,184</u>	96 165 2,777 3,418 1,777 2,762 1,990 1,875 1,692 1,038	94 158 <u>2,834</u> 3,686 1,897 2,857 2,096 1,972 1,970 1,020 15,498	88 146 <u>2,472</u> 2,627 1,338 2,716 1,638 1,424 1,329 868	82 151 2,641 2,821 1,508 2,745 1,719 1,616 1,474 968	94 169 2,570 2,993 1,517 2,908 1,856 1,701 1,468 807	91 157 <u>2,761</u> 3,366 1,702 2,924 2,049 1,913 1,713 992
SUWANNEE 1 SUWANNEE 2 SUWANNEE 3 <u>Steam-Oil, Total</u> <u>Steam-CC</u> BARTOW CC REP 1 CCF 1 HINES 1 HINES 1 HINES 2 HINES 3 HINES 4 TIGERBAY 1 <u>Steam-CC, Total</u> <u>CT</u> AVON PK 1 AVON PK 2	88 102 184 3,613 3,421 2,849 2,640 2,394 2,717 1,193 15,213 13 3	92 150 <u>2,908</u> 5,070 3,127 2,232 2,106 2,027 1,028 <u>15,589</u> 12 4	101 158 <u>3,002</u> 5,967 1,510 2,903 2,344 2,125 2,471 979 <u>18,299</u> 13 4	96 169 <u>2,897</u> 5,699 2,605 3,017 2,280 1,947 2,462 1,218 <u>19,228</u> 12 3	92 157 2,590 5,067 2,477 3,212 2,144 1,998 2,097 1,193 18,189 18,189	92 154 2,770 4,543 2,235 3,043 2,046 1,993 983 16,836 12 3	96 170 2,777 4,643 2,267 3,023 2,214 2,104 2,075 1,182 17,508	88 148 2,664 3,923 1,933 2,930 2,051 1,800 1,713 955 15,305	97 163 <u>2,833</u> 4,326 2,120 3,181 2,023 2,033 2,033 2,104 758 <u>16,545</u>	88 148 2,623 2,769 1,453 2,777 1,689 1,538 1,538 1,390 889 12,505	89 157 <u>2,694</u> 3,351 1,720 2,884 1,785 1,839 1,662 943 14,184	96 165 2,777 3,418 1,777 2,762 1,990 1,875 1,692 1,038 14,551	94 158 <u>2,834</u> 3,686 1,897 2,857 2,096 1,972 1,970 1,020 15,498	88 146 2,472 2,627 1,338 2,716 1,638 1,424 1,329 868 11,940	82 151 2,641 2,821 1,508 2,745 1,719 1,616 1,474 968 12,850	94 169 <u>2,570</u> 2,993 1,517 2,908 1,856 1,701 1,468 807 13,250	91 157 2.761 3,366 1,702 2,924 2,049 1,913 1,713 992 14,660
SUWANNEE 1 SUWANNEE 2 SUWANNEE 3 <u>Steam-Oil, Total</u> <u>Steam-CC</u> BARTOW CC REP 1 CCF 1 HINES 1 HINES 2 HINES 2 HINES 3 HINES 4 TIGERBAY 1 <u>Steam-CC, Total</u> <u>CT</u> AVON PK 1 AVON PK 2 BARTOW 1	88 102 184 3,613 3,421 2,849 2,640 2,394 2,717 1,193 <b>15,213</b> 13 3 2	92 150 2,908 5,070 3,127 2,232 2,106 2,027 1,028 15,589 12 4 12 4 1	101 158 <u>3,002</u> 5,967 1,510 2,903 2,344 2,125 2,471 979 <u>18,299</u> 13 4 1	96 169 2,897 5,699 2,605 3,017 2,280 1,947 2,462 1,218 <u>19,228</u> 12 3 0	92 157 2,590 5,067 2,477 3,212 2,144 1,998 2,097 1,193 18,189 18,189	92 154 2,770 4,543 2,235 3,043 1,993 2,046 1,993 983 16,836	96 170 2,777 4,643 2,267 3,023 2,214 2,104 2,075 1,182 17,508 12 3 1	88 148 2,664 3,923 1,933 2,930 2,051 1,800 1,713 955 15,305	97 163 <u>2,833</u> 4,326 2,120 3,181 2,023 2,033 2,104 758 <u>16,545</u> 12 3 1	88 148 <u>2,623</u> 2,769 1,453 2,777 1,689 1,538 1,390 889 <u>12,505</u> 12 3	89 157 2,694 3,351 1,720 2,884 1,785 1,839 1,662 943 14,184 12 3	96 165 2,777 3,418 1,777 2,762 1,990 1,875 1,692 1,038 14,551	94 158 2,834 3,686 1,897 2,857 2,096 1,972 1,970 1,020 15,498 12 3 1	88 146 2,472 2,627 1,338 2,716 1,638 1,424 1,329 868 11,940	82 151 2,641 2,821 1,508 2,745 1,719 1,616 1,474 968 12,850	94 169 2,570 2,993 1,517 2,908 1,856 1,701 1,468 807 13,250 13,250	91 157 <u>2,761</u> 3,366 1,702 2,924 2,049 1,913 1,713 992 <u>14,660</u> 13 3
SUWANNEE 1 SUWANNEE 2 SUWANNEE 3 <u>Steam-Oil, Total</u> <u>Steam-CC</u> BARTOW CC REP 1 CCF 1 HINES 1 HINES 1 HINES 2 HINES 3 HINES 4 TIGERBAY 1 <u>Steam-CC, Total</u> <u>CT</u> AVON PK 1 AVON PK 1 AVON PK 2 BARTOW 1 BARTOW 2	88 102 184 3,613 3,421 2,849 2,640 2,394 2,717 1,193 15,213 13 3 2 9	92 150 2,908 5,070 3,127 2,232 2,106 2,027 1,028 15,589 12 4 1 3	101 158 <u>3,002</u> 5,967 1,510 2,903 2,344 2,125 2,471 979 <u>18,299</u> 13 4	96 169 2,897 5,699 2,605 3,017 2,280 1,947 2,462 1,218 <u>19,228</u> 12 3 0 1	92 157 2,590 5,067 2,477 3,212 2,144 1,998 2,097 1,193 18,189 18,189	92 154 2,770 4,543 2,235 3,043 2,046 1,993 983 16,836 12 3	96 170 2,777 4,643 2,267 3,023 2,214 2,104 2,075 1,182 17,508	88 148 2,664 3,923 1,933 2,930 2,051 1,800 1,713 955 15,305	97 163 <u>2,833</u> 4,326 2,120 3,181 2,023 2,033 2,104 758 <u>16,545</u> 12 3	88 148 <u>2,623</u> 2,769 1,453 2,777 1,689 1,538 1,390 889 <u>12,505</u> 12 3	89 157 2,694 3,351 1,720 2,884 1,785 1,839 1,662 943 14,184 12 3 0	96 165 2,777 3,418 1,777 2,762 1,990 1,875 1,692 1,038 14,551 13 4 1	94 158 2,834 3,686 1,897 2,857 2,096 1,972 1,970 1,020 15,498	88 146 2,472 2,627 1,338 2,716 1,638 1,424 1,329 868 11,940	82 151 2,641 2,821 1,508 2,745 1,719 1,616 1,474 968 12,850 12 3 0	94 169 2,570 2,993 1,517 2,908 1,856 1,701 1,468 807 13,250 13,250	91 157 <u>2,761</u> 3,366 1,702 2,924 2,049 1,913 1,713 992 <u>14,660</u> 13 3 0 2 0
SUWANNEE 1 SUWANNEE 2 SUWANNEE 3 <u>Steam-Oil, Total</u> <u>Steam-CC</u> BARTOW CC REP 1 CCF 1 HINES 1 HINES 2 HINES 2 HINES 3 HINES 4 TIGERBAY 1 <u>Steam-CC, Total</u> <u>CT</u> AVON PK 1 AVON PK 2 BARTOW 1	88 102 184 3,613 3,421 2,849 2,640 2,394 2,717 1,193 <b>15,213</b> 13 3 2	92 150 2,908 5,070 3,127 2,232 2,106 2,027 1,028 15,589 12 4 12 4 1	101 158 <u>3,002</u> 5,967 1,510 2,903 2,344 2,125 2,471 979 <u>18,299</u> 18,299	96 169 2,897 5,699 2,605 3,017 2,280 1,947 2,462 1,218 <u>19,228</u> 12 3 0	92 157 2,590 5,067 2,477 3,212 2,144 1,998 2,097 1,193 18,189 18,189	92 154 2,770 4,543 2,235 3,043 1,993 2,046 1,993 983 16,836 12 3 0 1	96 170 2,777 4,643 2,267 3,023 2,214 2,104 2,075 1,182 17,508 12 3 1 3	88 148 2,664 3,923 1,933 2,930 2,051 1,800 1,713 955 15,305 12 3 0 1	97 163 2,833 4,326 2,120 3,181 2,023 2,033 2,104 758 16,545 12 3 1 3	88 148 2,623 2,769 1,453 2,777 1,689 1,538 1,390 889 12,505 12,505	89 157 2,694 3,351 1,720 2,884 1,785 1,839 1,662 943 14,184 12 3 0 1 12 3 0	96 165 2,777 3,418 1,777 2,762 1,990 1,875 1,692 1,038 14,551 13 4 1	94 158 2,834 3,686 1,897 2,857 2,096 1,972 1,970 1,020 15,498 12 3 1 2	88 146 2,472 2,627 1,338 2,716 1,638 1,424 1,329 868 11,940	82 151 2,641 2,821 1,508 2,745 1,719 1,616 1,474 968 12,850 12 3 0 1	94 169 2,570 2,993 1,517 2,908 1,856 1,701 1,468 807 13,250 12 3 0 1	91 157 <u>2,761</u> 3,366 1,702 2,924 2,049 1,913 1,713 992 <u>14,660</u> 13 3 0 2

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PEF CR3 Uprate CR3 Uprate (180MW full ownership, July 06 GFF base) – Florida *GWh* 

ANNOAL																	
	2009	<u>2010</u>	<u>2011</u>	<u>2012</u>	<u>2013</u>	<u>2014</u>	<u>2015</u>	2016	2017	<u>2018</u>	<u>2019</u>	2020	2021	<u>2022</u>	<u>2023</u>	<u>2024</u>	2025
BAYBORO 1	11	11	12	10	10	10	11	10	12	10	10						
BAYBORO 2	11	12	12	11	11	10	11	10	12	10	10	11	11	10	10	10	10
BAYBORO 3	13	13	14	12	12	12	13	12	14	12	10	11 13	11	11	10	11	11
BAYBORO 4	13	13	14	12	12	12	13	12	14	12	12	13	12 13	12	12	12	12
CTBar 1	39							12	1-4	12	12	15	15	12	12	12	13
CTBar 2	31																
CTFG 1		18	36	24	16	19	27	7	33	16	15	28	26	9	11	11	23
CTFG 2		12	25	19	11	10	21	9	22	13	9	23	22	8 8	9	12	18
CTFG 3		8	22	11	9	10	17	8	15	7	8	16	16	5	7	6	14
CTFG 4				2	7	7	11	6	12	6	3	7	12	- 5	5	6	11
DEBARY 1	10	10	10	9	9	9	9	9	. 10	9	9	10	9	9	9	9	9
DEBARY 2	8	8	9	8	8	8	8	7	8	8	7	9	8	7	7	8	- 8
DEBARY 3	9	9	9	8	8	8	8	8	8	8	8	9	8	8	8	8	9
DEBARY 4	9	9	9	8	8	8	8	8	9	8	8	9	8	8	8	8	8
DEBARY 5	8	8	8	7	8	7	7	7	8	7	7	8	8	7	7	7	8
DEBARY 6	7	7	8	7	7	7	7	7	8	7	7	8	7	7	7	7	7
DEBARY 7	90	89	91	88	89	88	89	89	91	88	88	87	89	83	88	88	89
DEBARY 8	91	90	93	90	89	89	91	89	91	90	89	91	90	88	89	89	90
DEBARY 9	88	86	88	85	85	85	87	77	86	85	84	85	86	85	84	84	85
DEBARY 10	29	30	30	29	29	29	29	29	29	29	29	30	29	29	29	29	29
HIGGINS 1 HIGGINS 2	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8
HIGGINS 2 HIGGINS 3	8 15	8	8 15	8	8	8	8	8	8	8	8	8	8	8	8	8	8
HIGGINS 3 HIGGINS 4	15	14 11	15	14 10	14 11	14 11	14 11	14	14	14 11	. 14 10	14 11	14 11	14 10	14 10	14 11	14 11
INT CITY 1	9	9	9	8	8	8	8	11 7	11 9	8	10	9	8	8	8	8	8
INT CITY 2	12	12	12	11	11	11	11	11	12	11	11	12	11	11	11	11	11
INT CITY 3	12	12	12	12	12	11	11	11	12	11	11	12	12	11	11	11	12
INT CITY 4	13	13	14	13	13	13	13	12	14	13	13	13	13	13	13	13	13
INT CITY 5	14	14	15	13	13	13	14	13	14	13	13	14	14	13	13	13	13
INT CITY 6	10	10	10	10	9	9	9	9	10	9	9	10	9	9	9	9	9
INT CITY 7	65	63	65	62	62	62	63	62	64	62	59	63	63	61	61	61	63
INT CITY 8	70	70	72	68	68	67	69	68	66	68	66	69	69	67	67	67	68
INT CITY 9	63	59	63	58	58	58	59	58	60	57	56	59	58	56	56	57	59
INT CITY 10	65	64	67	63	63	63	64	64	65	63	63	65	63	63	63	62	63
INT CITY 11	30	30	32	30	30	30	28	29	30	29	28	31	30	29	29	29	30
INT CITY 12	91	90	90	89	88	84	89	88	88	87	87	89	89	87	87	87	88
INT CITY 13	90	89	89	88	85	86	88	86	88	86	86	88	88	86	86	86	86
INT CITY 14	95	91	94	90	89	88	91	89	90	89	88	90	89	88	88	88	89
RIO PINAR 1	2	2	2	2	2	2	2	2	2	2	2	2	2	. 2	2	2	2 32
SUWANNEE 1	35	33	35	33	31	31	33	31	34	30	30	32	32	29	31	30 19	32 20
SUWANNEE 2	20	20	22	19	19	19	20	19	21	19	18	21	20	19	18 37	34	20 38
SUWANNEE 3	43	40	39	40	39	37	41	37	38	35	35	35	38	32 1	37	34 1	30
TURNER 1	1	1	1	1	1	1	1	1	1	1	1	1	1 1	1	1	1	1
TURNER 2	1	1	1	1	1	1	1	1	1	1	Т	1	i	1	•	1	'

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PEF CR3 Uprate CR3 Uprate (180MW full ownership, July 06 GFF base) – Florida GWh

ANNUAL

TURNER 3 TURNER 4 U OF FL 1 <u>CT, Total</u>	<u>2009</u> 13 10 362 <u>1,670</u>	2010 13 11 346 1,590	<u>2011</u> 14 12 338 <u>1,667</u>	2012 12 10 339 1,571	<u>2013</u> 12 10 347 <u>1,560</u>	2014 12 10 337 1.538	2015 13 10 363 <u>1,630</u>	2016 12 9 347 1,530	2017 13 10 363 1,652	2018 13 10 359 1,562	<u>2019</u> 12 10 360 <u>1,539</u>	<u>2020</u> 14 11 334 <u>1,609</u>	2021 13 10 359 1,618	2022 12 9 355 1,522	2023 12 9 339 1,522	2024 12 10 357 1,544	2025 13 10 356 1,600
C P & Lime	988	989															11222
Econpurc offp	332	332	332	332	332	332	332	332	332	332	332	332	332	332	332	332	332
Econpurc peak Osceola 158 Purc	422 3	422	422	421	421	421	421	421	421	421	421	423	421	421	421	421	421
OUC 150 Purc	5																
Shady Hills	89	110	112	106	58	43	108	42	110	39	41	80	92	29	37	44	60
SoCo Franklin		723	1,258	1,204	1,024	956	1,023	806	926				01	20	07		00
SoCo Scherer	0.500	330	557	549	538	521	521										
Southern UPS TEA 50 Purc	3,566	1,457															
Teco Purc	375	292	50														
Tran-Purc, Total	5,775	4,655	2,731	2,613	2,373	2,273	2,406	1,601	1,789	<u>792</u>	794	835	845	782	790	<u>797</u>	<u>813</u>
	<u> </u>					<u> </u>	21100	1,001	1,100	151	1.54	000	045	102	<u>750</u>	131	015
As Avail	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27
Auburn(As Avail)	37	38	37	38	38	38	38	38	38	37	38	38	37	38	37	37	37
Bay County																	
Biomass Energy	68	828	829	831	830	827	827	831	828	818	813	818	817	801	806	804	<sup>~</sup> 808
Cargill Dade County	312	313	313	313	313	240		240	040	200		040		001	205	200	200
DTE Biomass	21	21	21	21	21	312 21	313 21	313 21	312 21	309 21	309 21	310 21	310 21	304 21	305 21	306 21	306 21
El Dorado (APP)	475	474	473	477	475	473	473	476	474	474	474	476	475	474	474	476	474
G2 Energy	77	77	77	77	77	77	77	77	77	76	76	76	76	74	75	75	75
Lake Cogen	433	433	433	435	433	433	432	433	434	433	433	434	432	431	433	434	433
Lake County	80	80	80	80	80	80	80	80	80	79	79	80	79	79	79	79	79
LFC (APP)	82	81	82	81	81	.81	81	82	81	81	82	82	81	81	81	82	81
Mulberry	383	383	383	384	383	383	383	384	383	383	383	384	383	383	383	384	383 378
Orange Cogen	378	378	378	379	378	378	378	379	378	378	378	379	378	378 647	378 647	379 649	378 647
Orlando Cogen	647	647	647	649 631	647 628	647 629	647 629	649 631	647 629	647 628	647 629	649 630	647 629	647 629	628	630	628
Pasco Cogen	629 173	628 172	629 173	173	628 173	629 173	629 173	173	172	171	170	171	170	167	167	167	168
Pasco County Pinellas County	336	336	336	337	336	336	336	337	336	333	331	332	333	325	325	325	327
Ridge Gen St	245	246	246	246	246	245	245	246	245	243	243	243	242	240	240	240	241
Royster	149	149	149	149	149	149	149	149	149	149	149	149	149	149	149	149	149
Cogen, Total	4,550	5,312	5,314	<u>5,330</u>	<u>5,315</u>	<u>5,310</u>	5,308	<u>5,325</u>	<u>5,311</u>	<u>5,287</u>	<u>5,281</u>	<u>5,298</u>	5,287	<u>5,249</u>	<u>5,257</u>	<u>5,265</u>	5,263
Sales	-390	-386	-387	-387	-386	-395	-392	-392	-389	-411	-410	-420	-428	-474	-457	-470	-469
DSM	6	4	4	0	2	0	2	0	3	0	0	7	4	0	0	1	2
Total Load	50,800	<u>52,781</u>	<u>53,777</u>	55,049	<u>56,380</u>	<u>57,539</u>	<u>58,850</u>	<u>60,208</u>	<u>61,487</u>	<u>62,835</u>	<u>64,162</u>	<u>65,492</u>	<u>66,801</u>	<u>68,103</u>	<u>69,403</u>	<u>70,682</u>	<u>71,905</u>

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# PEF CR3 Uprate Uprate minus Base \$000

ANNUAL	2009	2010															
		<u>2010</u>	<u>2011</u>	<u>2012</u>	2013	2014	2015	<u>2016</u>	<u>2017</u>	2018	2019	2020	2021	2022	2023	2024	2025
CR NUC 3 NUC Future 1	59 0	1,813 0	2,250 0	8,561 0	7,949 0	8,899 0	8,287 0	9,302 0	8,560 -13	9,670 -245	9,004 -182	10,121 -193	9,401 -176	10,534 -205	9,809 -232	11,019 -254	10,235 -190
NUC Future 2	0	0	0	0	0	0	0	0	0	0	0	0	-28	-320	-286	-312	-240
<u>Nuclear,</u> <u>Total</u>	<u>59</u>	<u>1,813</u>	2,250	<u>8,561</u>	7,949	8,899	<u>8,287</u>	<u>9,302</u>	<u>8,547</u>	9,425	<u>8,822</u>	<u>9,928</u>	<u>9,198</u>	10,009	<u>9,291</u>	<u>10,454</u>	9,805
<u>Stearn-Coal</u> Crystal 1 Crystal 2 Crystal 4 Crystal 5 PV COAL 1 PV COAL 1 PV COAL 2 <u>Stearn-Coal,</u> <u>Total</u>	0 17 -5 8 16 0 36	<u>0</u> -282 -467 -162 -136 0 0 <u>-1.046</u>	0 -286 -331 -183 -148 0 0 -948	0 -1,683 -1,744 -1,040 -1,265 0 0 -5,733	0 -1,478 -2,364 -1,638 -1,432 -186 0 -7,098	9 -2,054 -2,425 -2,262 -2,308 -1,407 0 -10,456	<u>9</u> -2,036 -2,662 -2,291 -2,116 -1,172 -169 -10,446	<u>0</u> -1,673 -2,140 -2,353 -2,383 -1,274 -1,414 -11,236	<u>0</u> -1,748 -2,088 -2,486 -2,617 -1,179 -1,235 <u>-11,353</u>	<u>0</u> -2,025 -2,541 -2,875 -2,884 -2,385 -2,524 -15,235	<u>0</u> -1,834 -1,841 -2,063 -2,071 -2,039 -2,181 -12,029	<u>9</u> -2,045 -2,143 -2,367 -2,422 -2,239 -2,152 <u>-13,368</u>	<u>0</u> -2,064 -2,217 -3,161 -3,064 -2,270 -2,558 <u>-15,334</u>	<u>9</u> -2,181 -2,507 -2,725 -2,731 -2,650 -2,598 <u>-15,392</u>	<u>9</u> -2,039 -2,156 -2,652 -2,622 -2,295 -2,264 -13,894	<u>0</u> -2,103 -2,722 -3,071 -2,908 -2,745 -3,179 <u>-16,727</u>	<u>0</u> -1,968 -2,128 -2,540 -2,330 -2,222 -2,342 -13,531
<u>Steam-Qii</u> Anciote 1 Anciote 2 BARTOW 1 BARTOW 2 BARTOW 3 SUWANNEE	9 89 115 0 0 -13	0 -1,159 -1,297 0 0 0 -108	9 -1,027 -470 0 0 0 -41	•8,403 -8,458 0 0 0 -356	0 -2,596 -3,216 0 0 0 -454	-4,501 -4,821 0 0 -708	<u>0</u> -3,644 -3,013 0 0 0 -629	0 -2,214 -4,416 0 0 0 -298	9 -3,677 -4,734 0 0 0 -204	0 -4,764 -1,731 0 0 0 -81	0 -4,049 -3,418 0 0 -132	-5,842 -3,616 0 0 -213	-5,828 -8,453 0 0 0 0 0 -348	-3,323 -3,041 0 0 153	0 -4,316 -1,389 0 0 0 -491	_4,440 -3,864 0 0 0 144	-4,561 -4,190 0 0 -212
SUWANNEE	0	-47	72	-242	-403	-525	-204	-746	-422	-120	-51	-251	-250	31	-646	-371	-266
SUWANNEE	0	-44	-564	-1,007	-2,101	-1,203	-306	-117	-891	-204	-372	53	-1,094	-347	301	281	-351
3 <u>Steam-Oil.</u> <u>Total</u>	<u>191</u>	-2,655	-2,030	-18,466	<u>-8,770</u>	<u>-11,760</u>	<u>-7,796</u>	<u>-7,791</u>	<u>-9,928</u>	-6,899	<u>-8,023</u>	<u>-9,869</u>	<u>-15,974</u>	-6,527	-6,540	<u>-8,250</u>	<u>-9,580</u>
<u>Steam-CC</u> BARTOW CC REP_1	0 -1,716	0 -1,450	<u>0</u> -7,001	<u>0</u> -32,768	<b>0</b> -22,673	0 -21,366	<u>0</u> -25,543	0 -19,182	0 -17,785	<u>0</u> -19,533	<u>0</u> -19,228	0 -20,540	<u>0</u> -20,391	<u>0</u> -19,260	<u>0</u> -25,130	-24,027	<b>0</b> -18,945
CCF 1 HINES 1 HINES 2 HINES 3 HINES 4 TIGERBAY	0 -112 -344 -480 1,615 329	0 -802 -1,150 -2,264 -7,646 -1,612	-3,920 940 -5,890 -1,903 -4,804 1,652	-7,524 -4,597 -6,098 -7,007 -4,557 963	-9,059 -1.881 -11,518 -10,877 -3,754 -3,564	-8,577 -2,126 -7,935 -9,793 -9,807 -2,030	-9,877 -3,153 -6,965 -7,188 -7,482 1,431	-10,443 -2,424 -5,462 -11,868 -18,500 -4,910	-11,828 -3,456 -17,109 -9,099 -1,689 -4,076	-15,317 -1,233 -13,354 -10,156 -8,843 -7,952	-13,445 -2,156 -7,230 -13,085 -18,638 -4,438	-17,557 -4,471 -14,384 -10,665 -14,416 -6,774	-11,576 -2,755 -7,591 -12,921 -10,083 -3,144	-18,386 -4,149 -10,629 -16,572 -19,351 -211	-9,570 -7,895 -13,738 -12,041 -12,368 -885	-17,117 -4,623 -10,239 -15,431 -12,531 -2,725	-17,336 -8,716 -10,909 -12,708 -15,676 -1,736
Steam-CC,	-708	-14,923	-20,926	-61,588	-63,326	-61,634	-58,778	-72,789	-65,042	-76,387	-78,220	-88,807	-68,461	-88,558	-81,627	-86,691	-86,028
<u>Total</u> <u>CT, Total</u> <u>Tran-Purc,</u>	- <u>4</u> -85	<u>-734</u> -2,451	<u>-869</u> -3,241	<u>-5,221</u> -12,946	<u>-2,725</u> -10,550	<u>-3,765</u> -7,758	<u>-4,646</u> -8,614	<u>-2,987</u> -8,490	<u>-6,020</u> -8,087	<u>-2,770</u> -1,198	- <u>3,513</u> - <u>3,088</u>	<u>-5,537</u> <u>-3,591</u>	<u>-7.025</u> -3,660	<u>-2,080</u> -1,779	<u>-3,839</u> -2,368	<u>-3,588</u> -2,737	<u>-6,101</u> -3,894
<u>Total</u> <u>Cogen,</u> <u>Total</u>	<u>-77</u>	<u>-226</u>	<u>-91</u>	<u>-1,121</u>	<u>-787</u>	-1,765	<u>•1,981</u>	<u>-1,948</u>	<u>-1,519</u>	-3,255	<u>-2,523</u>	<u>•2,452</u>	<u>-3,069</u>	<u>-3,568</u>	<u>-2,812</u>	<u>-4,955</u>	-4,285
<u>NH3</u> CaCO3	0 0	-4 -11	-5 -12	-31 -85	-43 -120	-78 -223	-73 -213	-95 -278	-94 -280	-135 -407	-103 -315	-111 -345	-131 -413	-125 -400	-111 -361	-134 -442	-104 -348
<u>Total Cost</u>	<u>(587,3)</u>	(20,237,8)	(25,870,9)	(96,630,0)	(85,470.8)	<u>(88,538,8)</u>	(84,260.4)	<u>(96,311,5)</u>	<u>(93,775,4)</u>	(96,862,1)	(98,991,0)	(114,151.3)	(104,868.6)	(108,419,6)	(102,262.2)	(113,069,5)	(114,066.6)

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### PEF CR3 Uprate

July 2006 Generation & Fuel Forecast Base - Florida \$000

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ANNUAL																	
	2009	2010	2011	2012	2013	2014	2015	2010									
					<u> </u>	2014	4015	<u>2016</u>	2017	2018	2019	2020	<u>2021</u>	2022	2023	2024	2025
CR NUC 3 NUC Future 1	24,003	35,402	32,966	37,139	34,469	38,607	35,939	40,353	37,120	41,948	39,045	43,908	40,776	16 000			
NUC Future 1							·		4,352	54,955	55,361	43,908	40,776 57,663	45,699	42,539	47,806	44,386
Nuclear, Total	24.002	25 400							1,002	01,000	39,991	57,333	4,691	59,059 58,534	59,634 59,144	61,745	62,184
Hucieal, Total	24,003	35,402	32,966	37,139	34,469	38,607	35,939	40,353	41,473	96,904	94,406	101,308	103,130	163,292	161,317	61,157 170,708	61,698 168,267
Steam-Coal													1001100	100,202	101,017	110,100	100,201
Crystal 1	77,516	77,815	90,132	83,496													
Crystal 2	87,026	97,102	90,132 94,882	83,496 92,048	80,651	90,839	89,904	87,883	96,842	84,643	90,171	96,694	95,497	83,447	100,032	96.981	103,781
Crystal 4	153,019	146,950	145,187	92,046 149,113	108,438 151,015	102,526	106,131	107,448	108,441	99,370	109,285	108,300	104,024	109,441	110,662	112,956	125,355
Crystal 5	134,640	136,847	152,171	145,113	149,115	150,574 148,793	164,937	152,643	148,709	156,474	154,274	159,765	173,326	156,514	165,396	179,166	176,236
PV COAL 1			, u., i, i	147,210	86,930	151,596	162,995 155,333	150,374	146,735	154,038	152,026	157,174	171,394	154,912	161,862	176,556	173,134
PV COAL 2					00,000	101,050	12,346	158,379 156,564	162,094	156,814	162,925	167,480	172,662	165,157	172,905	177,547	184,563
Steam-Coal, Total	452,201	458,715	482,373	471,867	576,149	644,328	691,646	813,292	160,655 <u>823,476</u>	154,957 <u>806,295</u>	160,701 829,381	164,854 <u>854,267</u>	169,513 886,416	162,626	169,997	174,153	181,266
								010,404	010,470	000,230	023,301	054,207	000,410	832,097	880,854	917,358	944,336
Steam-Oil																	
Anclote 1	147,444	125,402	137,235	144,256	118,220	131,972	136,859	138,509	155,068	154,308	166,308	184,436	190,229	162,270	183,356	184,514	198,070
Anclote 2	130,926	97,106	100,278	112,181	99,077	102,925	102,919	108,679	123,759	118,351	129,918	137,902	152,074	133,846	141.009	134,104	155,802
BARTOW 1	24,979																
BARTOW 2 BARTOW 3	23,274																
SUWANNEE 1	39,600 14,606	0.400	40.540	40.554	10 000												
SUWANNEE 2	17,039	9,199 10,722	10,548	10,551	10,269	10,599	10,565	10,401	11,673	11,753	13,151	14,068	14,419	13,710	14,109	14,587	15,026
SUWANNEE 3	26,633	15,010	12,155 17,081	12,361 19,452	12,053 19,178	12,052	12,733	13,043	14,631	13,908	14,816	16,984	16,848	15,964	15,922	18,140	17,837
Steam-Oil, Total	424,501	257,439	277,297	298,801	258,797	17,958 <u>275,507</u>	19,437	18,035	21,640	20,149	22,737	24,718	25,290	23,300	23,887	27,379	26,652
Quan-Qil, Total	424,501	231,433	211,231	230,001	236,191	215,507	282,512	288,667	326,771	318,469	346,929	378,108	<u>398,859</u>	349,090	378,282	378,724	413,387
Steam-CC																	
BARTOW CC REP	268,371	346,360	421,543	447,874	393,247	355,857	378,454	340,089	386,694	282,785	344,622	367,644	398,816	303,592	332,944	354,291	392,595
1								·					-				
CCF 1			112,204	202,219	194,147	176,626	185,333	171,933	196,078	155,633	183,762	200,865	208,712	166,562	176,614	187,760	209,030
HINES 1	168,943	178,635	192,838	214,400	222,728	210,844	217,874	223,636	255,145	236,853	258,058	262,726	273,841	268,568	279,097	296,003	306,383
HINES 2	236,058	172,691	193,450	197,046	192,007	175,236	197,596	193,982	213,160	190,900	201,944	239,069	247,151	206,447	222,115	237,033	262,955
HINES 3	224,449	163,075	170,030	169,986	174,972	175,833	183,941	173,060	200,206	165,866	205,673	216,436	232,605	182,103	200,686 183,038	217,122 185,757	242,118 218,269
HINES 4	245,081	158,657	191,637	198,888	170,428	167,760	177,036	169,157	193,846	148,498	191,159 96,798	197,944 113,239	224,873 109,358	172,775 93,841	106,340	92,925	113,425
TIGERBAY 1 Steam-CC, Total	100,912 1,243,814	73,341 1,092,758	69,650 1,351,351	90,601 1,521,015	92,974 <u>1,440,503</u>	76,161 <u>1,338,316</u>	89,673 <u>1,429,908</u>	84,207 <u>1,356,064</u>	71,537 1,516,665	91,307 1,271,842	<u>96,798</u> 1,482,015	1,597,923	1,695,355	1,393,887	1,500,834	1,570,893	1,744,775
Steam-CC, Total	1,245,014	1,002,100	1,001,001	1,521,015	1,440,000	110001010	1,423,300	1,330,004	1,010,000	1,211,042	1,401,010	10071020	1,000,000	10001001	111121111		
<u>CT</u>																	
AVON PK 1	2,709	2,216	2,309	2,376	2,387	2,275	2,421	2,530	2,728	2,829	2,955	3,251	3,169	3,215	3,217	3,337	3,441
AVON PK 2	1,237	784	789	808	809	814	862	894	985	1,002	1,044	1,180	1,167	1,129	1,183	1,209	1,256
BARTOW 1	842	159	185	86	125	58	155	34	241	108	39	344	211	20	31	52	197
BARTOW 2	2,432	1,053	1,173	960	875	815	1,151	809	1,349	876	825	1,146	1,090	866	897	845 59	1,164 213
BARTOW 3	810	160	160	81	123	54	154	22	232	90	31	331	170	14	31 860	59 882	1,320
BARTOW 4	1,987	1,089	1,333	965	968	823	964	774	1,539	894	822	1,269	1,132	999 2,760	2,827	2.978	3,143
BAYBORO 1	3,084	2,037	2,210	2,096	2,001	1,977	2,229	2,201	2,810	2,402	2,523	2,932	2,952 3,027	2,780	2,985	3,167	3,251
BAYBORO 2	3,181	2,095	2,245	2,220	2,136	2,121	2,440	2,330	2,888	2,643	2,690	3,155 3,662	3,027	2,985	3,528	3,655	3,885
BAYBORO 3	3,929	2,418	2,670	2,496	2,456	2,408	2,764	2,740	3,288	2,984 3,076	3,027 3,129	3,602	3,595	3,463	3,538	3,706	3,903
BAYBORO 4	3,903	2,449	2,686	2,566	2,512	2,486	2,818	2,771	3,329	3,076	5,129	3,027	0,000	0,400	0,000	•	
CTBar 1	8,634																
CTBer 2	7,721	6 007	0.004	9,752	8.306	8,797	9,789	7,453	10,696	8.617	8,718	10,765	11,417	7,803	8,090	8,727	10,506
CTFG 1		5,387	9,924	9,752 8,855	7,916	7,740	9,789	7,453	9,448	8,246	7,938	10,053	10,318	7,651	7,910	8,546	9,614
CTFG 2		4,880	8,873	8,000	7,916	7,740	8,470	7,331	8,613	7,524	7,654	9,015	9,065	7,259	7,642	7,632	8,908
CTFG 3		4,436	8,510	3,971	7,262	7,243	7,830	7,100	7,958	7,425	7,002	7,393	8,335	7,172	7,253	7,448	8,355
CTFG 4 DEBARY 1	3,341	2,071	2.211	2,121	2,187	2,202	2,357	2,386	2,767	2,743	2,784	3 296	3,083	3,026	3,111	3,153	3,407
DEBARY 1 DEBARY 2	2,781	1,797	1,939	1,801	1,838	1,822	1,998	1,988	2,367	2,276	2,292	2,868	2,584	2,508	2,575	2,691	2,884
DEBARY 3	3,265	2.085	2,140	2,137	2,170	2,182	2,326	2,381	2,680	2,716	2,772	3,302	3,040	3,049	3,094	3,173	3,369
	0,200	2,000	-,		•			•									

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#### PEF CR3 Uprate July 2006 Generation & Fuel Forecase Base - Florida \$000

Annual																	
	2009	2010	2011	<u>2012</u>	2013	2014	2015	2016	2017	2018	2019	2020	2024	2020			
DEBARY 4	3,198	0.040						2010	2011	2010	2013	2020	<u>2021</u>	<u>2022</u>	2023	2024	<u>2025</u>
DEBARY 5	2,906	2,018 1,839	2,089	2,080	2,118	2,138	2,254	2,327	2,648	2,633	2,697	3,161	2,951	2.946	3,010	3,084	3,320
DEBARY 6	2,498	1,521	1,910 1,758	1,887	1,946	1,914	2,018	2,093	2,304	2,402	2,430	2,902	2,654	2,668	2,753	2,779	2,982
DEBARY 7	14,525	12.073	12,755	1,596 12,921	1,619	1,630	1,794	1,802	2,102	2,060	2,089	2,632	2,245	2,286	2,337	2,421	2,599
DEBARY 8	15.002	12,335	13,230	13,351	12,895 13,167	12,770	13,290	13,999	15,114	15,442	16,219	16,868	17,520	16,559	18,029	18,203	18,662
DEBARY 9	14,460	11,843	12,519	12,817	12,698	13,088	13,689	14,288	15,283	15,878	16,593	17,700	18,037	17,750	18,502	18,634	19,138
DEBARY 10	8.551	5,293	5,650	5,678	5,686	12,550	13,247	12,524	14,668	15,198	15,847	16,832	17,246	17,361	17,413	17,853	18,312
HIGGINS 1	1,806	1,519	1,580	1,618	1,615	5,824 1,589	6,070	6,368	6,880	7,103	7,423	8,111	8,046	8,124	8,296	8,491	8,715
HIGGINS 2	1,803	1,524	1,581	1,614	1,613	1,589	1,643	1,711	1,832	1,886	1,962	2,170	2,102	2,118	2,168	2,192	2,299
HIGGINS 3	3,006	2,471	2,597	2,634	2,615	2,578	1,652	1,711	1,832	1,897	1,965	2,169	2,038	2,127	2,175	2,199	2,260
HIGGINS 4	2,500	1,988	2,053	2,099	2,094	2,061	2,672 2,178	2,796 2,227	3,015 2,418	3,125 2,510	3,248	3,560	3,516	3,521	3,587	3,658	3,792
INT CITY 1	2,779	1,717	1,905	1,811	1,749	1.696	1.883	1,880	2,418	2,510	2,571 2,146	2,849 2,645	2,793	2,791	2,830	2,885	2,995
INT CITY 2	3,681	2.333	2,553	2,511	2,542	2,486	2,602	2,726	3,140	3,118	3,176	2,645	2,499 3,376	2,384 3,499	2,474 3,591	2,574 3,703	2,757 3,862
INT CITY 3	3,789	2,359	2,545	2,580	2,554	2,467	2,655	2,744	3,252	2,986	3,143	3,658	3,376	3,499 3,508	3,591	3,703	3,862 3,889
INT CITY 4	4,051	2,513	2,790	2,757	2,779	2,721	2,862	2,939	3,460	3,291	3,467	3,679	3,835	3,806	3,901	4,000	4,153
INT CITY 5	4,409	2,785	3,058	2,885	2,939	2,824	3,150	3,177	3,720	3,540	3,649	4,224	4,129	3,945	4,137	4,082	4,424
INT CITY 6	3,126	2,019	2,072	2,070	1,992	1,973	2,215	2,216	2,675	2,437	2,489	2,977	2,901	2,794	2,869	2,975	3,089
INT CITY 7	8,929	8,834	9,415	9,461	9,430	9,258	9,717	10,192	11,062	11,311	11,167	12,757	12,876	12,812	13,171	13,203	13,799
INT CITY 8	9,586	9,714	10,343	10,309	10,285	10,112	10,607	11,123	11,490	12,265	12,741	13,851	14,258	13,992	14,177	14,354	14,953
INT CITY 9	8,850	8,500	9,230	9,152	8,974	8,931	9,401	9,865	10,683	10,657	11,131	12,166	12,361	12,276	12,495	12,566	13,292
INT CITY 10	9,161	9,246	9,928	9,913	9,739	9,679	10,113	10,646	11,537	11,816	12,267	13,225	13,460	13,342	13,711	13,792	14,284
INT CITY 11	7,628	4,682	5,109	4,997	5,052	5,075	5,101	5,557	6,123	6,090	6,157	7,277	6,967	7,002	7,119	7,309	7,629
INT CITY 12 INT CITY 13	11,869	12,074	12,522	13,057	12,692	12,259	13,179	13,798	14,686	15,265	16,119	17,254	17,667	17,472	17,800	18,125	18,737 16,774
INT CITY 14	10,867 11,472	11,007 11,333	11,470 11,978	11,664 12,149	11,282 11,897	11,469	11,949	12,415	13,459	13,869	14,560 15,162	15,587 16,254	15,959 16,455	15,781	16,270 16,791	16,358 17,099	17,436
RIO PINAR 1	599	386	396	399	415	11,823 401	12,381 415	13,061 442	13,930 477	14,459 492	509	587	10,455	16,374 558	577	580	616
SUWANNEE 1	10,642	5,991	6.445	6.869	6,592	6,778	7,264	7,256	8,084	7,577	8,257	8,863	9,364	8,491	9 406	9.432	10,120
SUWANNEE 2	6.011	3,616	4,089	3,823	3,795	3,766	4,175	4,261	4,884	4,671	4,737	5,536	5,516	5.314	5,435	5,529	5,976
SUWANNEE 3	12,671	6,998	7,114	8,201	7,699	7,485	8.667	8,466	8,861	8,644	9,425	9,658	10,901	9.068	10,453	10,345	11,529
TURNER 1	273	183	183	172	180	173	190	191	232	221	215	284	257	236	252	255	267
TURNER 2	390	254	263	255	255	252	282	280	312	315	316	397	372	350	364	370	393
TURNER 3	3,765	2,370	2,633	2,417	2,419	2,406	2,636	2,609	3,053	3,094	2,975	3,733	3,455	3,341	3,396	3,493	3,801
TURNER 4	3,034	1,958	2,163	1,916	1,918	1,963	2,096	2,101	2,526	2,480	2,507	3,046	2,810	2,678	2,706	2,861	3,093
U OF FL 1	19,048	18,538	30,984	32,402	32,767	31,714	35,138	35,649	39,346	41,161	43,398	42,548	46,328	46,740	45,621	48,614	49,482
CT, Total	276,741	218,947	256,269	261,388	259,493	256,848	277,072	276,800	311,394	308,473	319,003	350,381	356,817	341,290	350,122	358,845	378,243
C P & Lime	48,882	49,236															
Econpurc offp	24,017	24,017	24.017	24,017	24,017	24,017	24,017	24,017	24,017	24,017	24,017	24,017	24,017	24,017	24,017	24,017	24,017
Econourc peak	49,009	48,852	48,872	48,453	48,453	48,453	48,453	48,453	48,527	48,453	48,453	49,561	48,563	48,453	48,453	48,453	48,501
Osceola 158 Purc	1,768																
OUC 150 Purc															40.670	45.040	49,319
Shady Hills	42,468	42,483	43,251	47,912	39,670	41,822	51,522	42,394	52,498	41,357	44,511	50,432	53,233	41,269	43,572	45,249	45,515
SoCo Franklin		63,736	113,946	119,241	106,740	98,780	105,947	96,601	107,610								
SoCo Scherer		16,115	27,763	28,112	28,189	28,101	28,587										
Southern UPS	143,923	60,078															
TEA 50 Purc																	
Teco Purc	27,904	23,615	3,954		247 000	741 477	750 576	211,465	232,653	113,827	116,981	124,010	125,813	113,739	116,042	<u>117,719</u>	121,838
Tran-Purc, Total	337,972	328,132	261,802	267,736	247,069	241,173	258,526	211,465	232,055	113,027	110,001						
A	1 044	1 510	1,625	1,686	1,573	1,594	1,597	1,595	1,787	1,534	1,739	1,803	1,902	1,683	1,908	1,900	2,027
As Avail	1,844 3,214	1,510 2,514	2,591	2,704	2,653	2,546	2,737	2,754	3,038	2,770	3,091	3,162	3,351	3,019	3,248	3,427	3,574
Aubum(As Avail)	ગ,∠14	2,314	2,001	4.104	2,000		2,. 57								~~ ~~~	67.005	58,325
Bay County Biomass Energy	4,201	52,186	51,185	50,651	50,641	50,731	51,449	52,354	52,902	53,278	53,979	54,646	55,452	55,376	56,522	57,225	50,325
Cargill	••									40.077	20 664	21,140	21,723	20,515	21,459	21,767	22,787
Dade County	25,913	26,828	28,326	29,566	29,673	19,693	20,252	20,252	20,986	19,677	20,551 1,670	∠1,140 1,846	1,897	20,515	1,979	2,025	2,084
DTE Biomass	1,815	1,603	1,549	1,516	1,514	1,519	1,545	1,581	1,605 40,709	1,617 39,978	41,263	42,148	43,179	42,328	44,110	44,698	46,319
El Dorado (APP)	52,B35	55,548	57,940	60,674	63,193	37,658	38,575	39,391	40,709	33,570	-1,200	,, , , ,		-2,-20			

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Progress Energy Florida Docket No. 060642-EI Response to Staff Interrogatory No. 5 Attachment 2 Page 11 of 14

PEF CR3 Uprate July 2006 Generation & Fuel Forecase Base - Florida \$000

A																	
Annual	<u>2009</u>	<u>2010</u>	2011	2012	2013	2014	<u>2015</u>	2016	<u>2017</u>	<u>2018</u>	2019	2020	<u>2021</u>	2022	<u>2023</u>	2024	2025
G2 Energy	3,843	3,871	3,898	3,932	3,944	3,968	3,991	4,032	4.045	4,041	4,086	4,109	4,134	4,117	5,385	5,445	5,687
Lake Cogen	54,520	57,451	60,037	62,953	52,462	34,450	35,453	35,842	37,219	36,274	37,769	38,568	39,352	38,662	40.171	40,985	42,412
Lake County	9,263	9,736	10,239	10,791	11,364	8,646	5,329	5,339	5.541	5,251	5,493	5,591	5,715	5,505	5,696	5,821	6,062
LFC (APP)	9,803	10,304	10,838	11,417	12,031	6,176	6,350	6,439	6.643	6.501	6.757	6.887	7,061	6,874	7,168	7,278	7,572
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Mulberry	47,724	50,246	52,582	55,114	57,627	60,354	63,229	66,213	69,293	72,492	75,907	79,484	83,157	87,028	91,191	75,277	35,636
Orange Cogen	42,603	44,809	46,808	46,113	48,121	50,278	52,586	54,920	57,374	59,736	62,496	65,320	68,232	71,118	74,496	77,882	81,532
Orlando Cogen	52,929	55,018	57,356	59,952	62,317	64,791	67,363	70.023	72,705	75,504	78,461	81,575	84,630	88,094	91,649	44,531	46,531
Pasco Cogen	47,230	42,644	43,882	44,399	43,730	43,151	44,291	44,440	46,165	44,010	45,898	46,848	48,194	46,581	48,261	49,067	51,137
Pasco County	17,449	18,304	19,228	20,230	21,272	22,339	23,497	24,730	26,070	27,376	28,892	30,531	32,212	33,822	35,759	37,792	12,531
Pinellas County	39,628	41,653	43,825	46,172	48,648	51,194	53,927	56,863	60,011	63,110	66,732	70,569	74,594	78,447	83,042	87,830	25,475
Ridge Gen St	18,883	19,437	19,770	20,143	20,318	20,584	20,842	21,127	21,354	21,531	21,794	22,053	22,262	22,455	22,804	18,757	19,653
Royster	16,489	11,222	11,309	11,509	11,406	11,288	11,582	11,754	12,158	11,882	12,333	12,599	12,879	12,597	13,127	13,325	13,858
Cogen, Total	450,187	504,884	522,988	<u>539,522</u>	542,487	490,959	504,594	<u>519,650</u>	539,603	546,562	568,910	<u>588,880</u>	609,925	620,138	647,974	595,032	483,203
NH3	3,611	4,066	4,119	3,940	5,181	5,948	6,397	8,024	7,894	7,783	7,765	7,855	8,154	7,441	7,656	7,916	7,876
CaCO3	1,098	10,389	10,959	10,860	14,462	16,913	18,492	23,392	23,390	23,429	23,712	24,407	25,739	23,828	24,894	26,158	26,407
Total Cost	<u>3,214,129</u>	<u>2.910,732</u>	3,200,124	3,412,267	3,378,609	3,308,600	3,505,086	3,537,707	3,823,319	3,493,585	<u>3,789,102</u>	<u>4,027,139</u>	4,210,207	3,844,802	4,067,973	4,143,351	4,288,333

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#### PEF CR3 Uprate

CR3 Uprate (180MW full ownership, July 06 GFF base) - Florida \$000

ANNUAL																	
	2009	2010	2011	<u>2012</u>	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
CR NUC 3 NUC Future 1 NUC Future 2	24,063	37,215	35,215	45,700	42,417	47,506	44,225	49,654	45,680 4,339	51,618 54,711	48,049 55,180	54,029 57,207	50,177 57,488	56,233 58,854	52,348	58,825	54,621
NUC Future 2 Nuclear, Total	24,063	37,215	35,215	45,700	42,417	47,506	44,225	49,654	50,020	106,329	103,229		4,663	58,214	59,401 58,858	61,491 60,846	61,993 61,458
Steam-Coal								101001	00,020	100,023	103,223	111,236	112,328	173,301	<u>170,607</u>	181,162	178,072
Crystal 1	77,533	77,533	89,846	81,813	79,173	88,784	87,868	86,211	95,094	82.618	88,337	94,649	93,433	81,266	97,993	04.070	101 010
Crystal 2	87,021	96,636	94,551	90,304	106,074	100,102	103,469	105,309	106,352	96,828	107,444	106,157	101,807	106,934	108,543	94,878 110,235	101,813 123,227
Crystal 4 Crystal 5	153,027	146,788	145,005	148,073	149,378	148,312	162,646	150,290	146,223	153,598	152,211	157,398	170,165	153,789	162,840	176,095	173,696
PV COAL 1	134,656	136,711	152,023	145,945	147,683	146,485	160,879	147,991	144,118	151,154	149,955	154,752	168,330	152,180	159,240	173,647	170,805
PV COAL 2		-			86,744	150,189	154,161	157,105	160,915	154,429	160,885	165,241	170,391	162,507	170,610	174,802	182,340
Steam-Coal, Total	452,237	457,668	481,425	466,134	569,051	633,872	12,177 681,200	155,150 802,056	159,420	152,433	158,520	162,702	166,955	160,028	167,733	170,974	178,925
_						000,072	001,200	802,030	812,123	791,060	817,351	840,900	871,082	816,704	866,959	900,632	930,806
<u>Steam-Oil</u>																	
Anclote 1 Anclote 2	147,533	124,243	136,208	135,853	115,624	127,471	133,215	136,295	151,391	149,544	162,259	178,594	184,400	158,947	179,040	180,074	193,509
BARTOW 1	131,041 24,979	95,809	99,808	103,722	95,861	98,104	99,906	104,263	119,025	116,620	126,500	134,286	143,621	130,805	139,620	130,241	151,612
BARTOW 2	23,274																
BARTOW 3	39,600																
SUWANNEE 1	14,593	9,091	10,507	10,195	9,815	9,891	9,936	10,103	11,469	11,672	13,019	13,854	14,071	13,863	13,619	14,731	14,814
SUWANNEE 2	17,039	10,675	12,227	12,119	11,650	11,526	12,528	12,297	14,209	13,789	14,764	16,733	16,597	15,995	15,276	17,769	17,570
SUWANNEE 3 Steam-Qil, Total	26,633 424,692	14,966	16,517	18,445	17,077	16,755	19,131	17,918	20,749	19,944	22,365	24,771	24,196	22,953	24,188	27,659	26,301
Steam-Qit, Totai	424,092	254,784	275,268	280,334	250,026	263,747	274,716	280,876	316,843	311,570	338,907	368,240	382,886	342,563	<u>371,742</u>	370,474	403,807
Steam-CC																	
BARTOW CC REP 1	266,655	344,910	414,542	415,107	370,574	334,492	352,911	320,906	368,908	263,253	325,394	347,104	378,425	284,332	307,815	330,264	373,650
CCF 1			108,284	194,695	185,089	168,048	175,456	161,491	184,250	140,316	170,317	183,308	197,136	148,176	167,044	170,644	191,694
HINES 1	168,831	177,834	193,777	209,803	220,847	208,718	214,720	221,212	251,689	235,621	255,902	258,256	271,086	264,419	271,202	291,381	297,667
HINES 2 HINES 3	235,713 223,969	171,541 160,811	187,560 168,128	190,948 162,979	180,489 164,095	167,301 166,041	190,631 176,753	188,520	196,051 191,107	177,546 155,710	194,714 192,588	224,685 205,771	239,559 219,684	195,818 165,531	208,377 188,645	226,795 201,691	252,045 229,410
HINES 4	223,909	151,011	186,833	194,331	166,673	157,953	169,554	161,192 150,657	191,107	139,655	172,521	183,527	219,004	153,423	170,669	173,227	202,592
TIGERBAY 1	101,241	71,729	71,301	91,564	89,410	74,131	91,105	79,297	67,461	83,355	92,360	106,465	106,214	93,629	105,455	90,200	111,689
Steam-CC, Total	1,243,106	1,077,834	1,330,425	1,459,427	1,377,177	1,276,682	1.371.130	1,283,275	1,451,623	1,195,455	<u>1,403,796</u>	<u>1,509,116</u>	1,626,894	1,305,329	1,419,207	1,484,202	1,658,747
CI																	
AVON PK 1	2,709	2.211	2,314	2,366	2,364	2,275	2,415	2,536	2,696	2,819	2,955	3,246	3,168	3,215	3,217	3,337	3,441
AVON PK 2	1,237	779	790	802	816	811	874	894	982	992	1,044	1,175	1,160	1,129	1,183	1,209 30	1,236 130
BARTOW 1	842	155	152	59	82	46	115	17	158	70	13	288 977	181 1,051	20 778	31 711	739	985
BARTOW 2	2,432	1,040	1,160	813 40	850 83	726 41	1,051 108	731 17	1,207 165	827 44	728 13	282	158	14	31	39	135
BARTOW 3 BARTOW 4	810 1.987	149 1.048	157 1,284	810	935	712	835	752	1,373	919	732	1,098	1,085	800	674	823	1,109
BAYBORO 1	3,084	2.043	2,234	2,027	1,966	1,935	2,177	2,139	2,657	2,345	2,487	2,791	2,870	2,760	2,764	2,922	3,037
BAYBORO 2	3,181	2,101	2,235	2,108	2,099	2,100	2,353	2,282	2,722	2,598	2,690	3,052	2,967	3,014	2,906	3,168	3,208 3,730
BAYBORO 3	3,929	2,403	2,678	2,403	2,405	2,357	2,721	2,663	3,195	2,986	3,004	3,543	3,335 3,507	3,337 3,440	3,431 3,492	3,587 3,657	3,829
BAYBORO 4	3,903	2.424	2,692	2,459	2,457	2,451	2,757	2,710	3,244	3,035	3,089	3,618	3,507	3,440	3,432	5,007	0,020
CTBar 1	8,634																
CTBar 2 CTFG 1	7,721	5,316	9,716	8,709	7,967	8,202	9,070	7,139	10,025	8,288	8,200	10,001	9,848	7,661	7,924	8,018	9,708
CTFG 2		4,758	8,732	8,241	7,506	7,384	8,519	7,384	8,864	7,888	7,530	9,387	9,340	7,428	7,624	8,032	8,980 8,421
CTFG 3		4,402	8,415	7,519	7,235	7,308	8,043	7,209	8,027	7,272	7,374	8,517	8,510	7,096	7,383 7,0 <del>9</del> 6	7,289 7,208	8,421 8,013
CTFG 4		-		3,874	7,087	7,105	7,535	6,992	7,755	7,122	6,832	7,259	8,001	7,032 3,026	3,093	3,153	3,361
DEBARY 1	3,341	2,067	2,203	2,114	2,185	2,189	2,309	2,384	2,642	2,716 2,254	2,769 2,284	3,226 2,829	3,059 2,580	2,508	2,566	2,676	2,833
DEBARY 2	2,781	1,778	1,917	1,776 2,128	1,802 2,178	1,816 2,174	1,929 2,283	1,964 2,374	2,258 2,575	2,254 2,687	2,264	3,212	3,037	3,049	3,094	3,155	3,340
DEBARY 3	3,265	2,070	2,114	2,120	2,170	4,1/4	£,£03	2,514	2,010	2,007	2,.04		-,	-,			

Progress Energy Florida Docket No. 060642-EI Response to Staff Interrogatory No. 5 Attachment 2 Page 13 of 14 .

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#### PEF CR3 Uprate CR3 Uprate (180MW full ownership, July 06 GFF base) - Florida \$000

ANNUAL																	
	2009	2010	2011	2012	2013	<u>2014</u>	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
DEBARY 4	3,198	1,982	2,062	2,071	2,116	2,102								LVLA	1010	1014	2025
DEBARY 5	2,906	1,835	1,908	1,878	1,928	1,886	2,226 1,992	2,318	2,546	2,601	2,697	3,105	2,956	2,946	3,010	3,084	3,216
DEBARY 6	2,498	1,516	1,729	1,590	1,619	1,630	1,992	2,099 1,800	2,268	2,318	2,430	2,834	2,666	2,668	2,753	2,779	2,946
DEBARY 7	14,525	12,023	12,758	12,931	12,847	12,672	13,231	13,934	2,057 15,031	2,040 15,435	2,081	2,555	2,245	2,286	2,328	2,421	2,553
DEBARY 8	15,002	12,338	13,199	13,262	13,057	13,002	13,663	14,206	15,031	15,435	16,162 16,511	16,814	17,434	16,559	17,927	18,200	18,637
DEBARY 9	14,460	11,823	12,560	12,762	12,610	12,447	13,181	12,502	14,617			17,626	17,869	17,728	18,369	18,621	19,060
DEBARY 10	8,551	5,284	5,582	5,685	5,686	5,824	6,070	6,368	6,818	15,168 7,091	15,811 7,423	16,761	17,127	17,310	17,373	17,817	18,257
HIGGINS 1	1,806	1,515	1,571	1,604	1,617	1,581	1,637	1,711	1,822	1,872	1,962	8,018 2,130	8,009	8,124	8,296	8,481	8,715
HIGGINS 2	1,803	1,522	1.581	1.604	1,612	1,580	1,642	1,711	1,830	1.895	1,962	2,150	2,116 2.052	2,118 2,127	2,168 2,175	2,192 2,194	2,268 2,237
HIGGINS 3	3,006	2,494	2,614	2,612	2,594	2,569	2,639	2,796	2,983	3,105	3,241	3,545	3,493	3,521	3,587	3,658	3,783
HIGGINS 4	2,500	1,973	2,038	2,074	2.077	2,054	2,147	2,227	2,386	2,487	2,561	2,832	2,788	2,791	2,828	2,684	2,986
INT CITY 1	2,779	1,704	1,891	1,700	1,728	1,650	1,763	1,789	2,322	2,096	2,079	2,500	2,407	2,379	2,377	2,537	2,500
INT CITY 2	3,681	2,325	2,552	2,452	2.514	2,477	2,578	2,726	3,078	3,098	3,164	3,572	3,379	3,499	3,559	3,682	3,802
INT CITY 3	3,789	2,345	2,552	2,499	2,514	2.442	2.617	2,699	3,154	2,981	3,123	3,619	3,491	3,498	3,492	3,540	3,807
INT CITY 4	4,051	2,513	2,775	2,688	2,757	2,712	2,812	2,931	3,362	3,280	3,438	3,672	3,824	3,816	3,861	3,980	4,095
INT CITY 5	4,409	2,771	3,048	2,856	2,880	2,814	3,083	3,128	3,631	3,480	3,629	4,192	4,075	3,974	4,086	4.072	4,383
INT CITY 6	3,126	1,968	2,035	2,022	1,969	1,965	2,141	2,136	2.618	2,405	2,480	2,940	2,809	2,793	2,810	2,985	3.016
INT CITY 7	8,929	8,824	9,453	9,386	9,388	9,237	9,673	10,190	11,002	11,257	11,238	12.675	12,794	12,743	13,000	13,203	13,723
INT CITY 8	9,586	9,692	10,357	10,233	10,241	9,990	10,612	11,050	11,349	12,244	12,665	13,798	14,063	13,844	14,078	14,354	14,846
INT CITY 9	8,850	8,499	9,246	9,032	8,957	8,883	9,355	9,671	10,530	10,666	11,040	11,993	12,156	12,013	12,179	12,544	13,075
INT CITY 10	9,161	9,191	9,900	9,876	9,766	9,614	10,054	10,654	11,458	11,773	12,253	13,228	13,266	13,355	13,597	13,776	14,242
INT CITY 11	7,628	4,682	5,082	4,957	5,026	5,064	5,074	5,528	6,008	6,090	6,157	7,191	6,967	7,002	7,100	7,309	7,584
INT CITY 12	11,869	12,072	12,500	12,936	12,680	12,080	13,145	13,790	14,586	15,277	16,064	17,178	17,547	17,488	17,767	18,125	18,687
INT CITY 13	10,867	10,965	11,386	11,678	11,277	11,307	11,886	12,381	13,353	13,791	14,470	15,528	15,880	15,733	16,040	16,292	16,730
INT CITY 14	11,472	11,335	12,018	12,104	11,897	11,756	12,403	12,955	13,783	14,476	15,041	16,104	16,284	16,358	16,686	17,001	17,436
RIO PINAR 1	599	386	399	391	410	398	415	441	476	483	509 7.939	598	575 9.003	558 8,437	577 9.279	580 9,150	610 9,667
SUWANNEE 1 SUWANNEE 2	10,642 6,011	6,017 3,582	6,565 4,066	6,575 3,748	6,321 3,723	6,411 3,674	7,046 4,090	6,938 4,177	7,952 4,814	7,499 4,625	4.651	8,691 5,454	5,375	5,214	5.241	5,449	5,809
SUWANNEE 3	12,671	3,362 7,002	7,010	7,675	7,479	7,227	8,227	8,050	8,576	8,470	8,975	9,271	10,324	8,870	10,461	9,916	11,199
TURNER 1	273	178	191	170	178	167	187	184	223	205	215	. 282	257	236	252	255	273
TURNER 2	390	256	259	248	252	247	275	273	312	302	316	398	369	350	364	370	393
TURNER 3	3,765	2,368	2,606	2,391	2,384	2,394	2,595	2,614	2.977	3.036	2,971	3,667	3,456	3,341	3,396	3,478	3,724
TURNER 4	3.034	1,958	2,144	1,892	1.883	1,930	2,038	2,082	2,405	2,406	2,463	2,991	2,756	2,678	2,706	2,839	3,025
U OF FL 1	19.044	18,533	30,970	32 335	32,766	31,666	35,083	35,565	39,258	40,995	43,259	42,416	46,121	46,544	45,341	48,446	49,224
CT, Total	276,737	218,214	255,401	256,167	256,767	253,083	272,426	273,813	305,374	305,703	315,490	344,844	349,792	339,211	346,282	355,257	372,143
C P & Lime	48,873	49,223	<u> </u>		04 047	24 247	24.017	24.017	24.017	24.017	24,017	24,017	24,017	24.017	24,017	24,017	24,017
Econpurc offp	24,017	24,017	24,017	24,017	24,017	24,017	24,017	24,017 48,453	48,453	48,453	48,453	49,200	48,453	48,453	48,453	48,453	48,453
Econpurc peak	49,009	48,852	48,822	48,453	48,453	48,453	48,453	40,400	40,400	40,400	40,400	10,200			•		
Osceola 158 Purc	1,768																
OUC 150 Purc			10.004	42,523	36,589	38,559	47,661	40,365	49,275	40,159	41,423	47,202	49,683	39,491	41,204	42,511	45,474
Shady Hills	42,468	41,381	42,331	42,523	36,569 99,496	94,517	101,477	90,140	102,821	10,100							
SoCo Franklin		62,572	111,675	27,947	27,964	27,870	28,305	30,140	102,021								
SoCo Scherer		16,096	27,765	27,947	21,504	21,070	20,505										
Southern UPS	143,902	60,089															
TEA 50 Purc		00.450	3,951														
Teco Purc	27,849 337 <u>,687</u>	23,450 <u>325,681</u>	258,561	254,790	236,520	233,415	249,912	202,976	224,566	112,629	113,893	120,418	122,153	<u>111,961</u>	113,674	114,981	117,944
Tran-Purc, Total	331,601	323,001	230,301	134,130	200,020	EFTELLE									4 951	1 822	1,979
As Avail	1,843	1,497	1,632	1,621	1,562	1,539	1,557	1,551	1,733	1,483	1,694	1,756	1,845	1,633 2,932	1,851 3,220	1,822 3,317	3,480
Aubum(As Avail)	3,214	2,489	2,583	2,566	2,581	2,473	2,656	2,617	2,963	2,670	3,057	3,028	3,203	2,932	3,220	0.017	0,100
Bay County										67.000	53,552	54,441	55,190	55,064	56,151	56,848	57,965
Biomass Energy	4,180	52,192	51,153	50,595	50,666	50,700	51,399	52,304	52,876	53,083	55,552	Jan 1 4 4 1	55,150	00,004			
Cargill					00 5 4 0	10 10 1	10.055	20.004	20,745	19,332	20,219	20,779	21,324	20,041	21,067	21,332	22,480
Dade County	25,919	26,801	28,313	29,423	29,519	19,404 1,515	19,955 1,540	1,577	1,603	1,611	1,657	1,839	1,888	1,905	1,962	2,010	2,071
DTE Biomass	1,814	1,603	1,549 57,940	1,513 60,674	1,514 63,193	37,350	38,250	39,055	40,520	39,347	40,938	41,827	42,752	41,788	43,809	44,183	45,938
El Dorado (APP)	52,835	55,548	31,340	00,014	00,100	0,000	00,200	00,000		••••	•						

Progress Energy Florida Docket No. 060642-EI Response to Staff Interrogatory No. 5 Attachment 2 Page 14 of 14

#### PEF CR3 Uprate CR3 Uprate (180MW full ownership, July 06 GFF base) - Florida \$000

ANNUAL																	
	2009	2010	2011	<u>2012</u>	2013	2014	2015	2016	<u>2017</u>	<u>2018</u>	<u>2019</u>	2020	2021	2022	<u>2023</u>	2024	<u>2025</u>
G2 Energy	3,840	3,870	3,899	3,925	3,944	3,962	3,986	4,025	4,041	4,022	4,063	4,092	4,115	4,097	5,299	5,342	5,609
Lake Cogen	54,516	57,451	60,027	62,943	52,395	34,221	35,136	35,526	36 977	35,733	37,485	38,282	38,905	38,215	39,861	40,498	42,034
Lake County	9,262	9,738	10,237	10,783	11,364	8,591	5,263	5,271	5,467	5,159	5,415	5,501	5,613	5,408	5,617	5,719	5,986
LFC (APP)	9,803	10,305	10,838	11,418	12,031	6,122	6,299	6,381	6,608	6,395	6,698	6,829	6,982	6,775	7,104	7,186	7,506
Mulberry	47,724	50,247	52,582	55,117	57,629	60,352	63,228	66,207	69,283	72,456	75,892	79,466	83,128	86,985	91,150	75,065	35,345
Orange Cogen	42,603	44,806	46,808	46,103	48,113	50,259	52,560	54,889	57,340	59,633	62,451	65,274	68,156	71,006	74,418	77,777	81,488
Orlando Cogen	52,929	55,018	57,356	59,952	62,317	64,791	67,363	70,023	72,705	75,504	78,461	81,575	84,630	88,094	91,649	43,691	45,900
Pasco Cogen	47,203	42,505	43,862	43,887	43,300	42,670	43,721	43,965	45,751	43,309	45,342	46,284	47,502	45,742	47,699	48,270	50,577
Pasco County	17,447	18,303	19,223	20,215	21,271	22,322	23,485	24,710	26,053	27,336	28,852	30,482	32,169	33,749	35,696	37,736	12,323
Pinellas County	39,623	41,660	43,819	46,150	48,646	51,156	53,905	56,838	59,987	63,040	66,647	70,479	74,524	78,317	82,895	87,696	25,091
Ridge Gen St	18,878	19,438	19,769	20,136	20,316	20,570	20,832	21,110	21,346	21,502	21,732	22,005	22,200	22,396	22,701	18,424	19,399
Royster	16,476	11,187	11,309	11,378	11,338	11,199	11,479	11,650	12,084	11,692	12,231	12,490	12,729	12,423	13.014	13,160	13,745
Cogen, Total	450,111	504,659	522,897	538,401	<u>541,699</u>	489,195	502,613	517,703	538,083	543,307	566,387	586,428	606,856	616,570	<u>645,162</u>	590,076	478,917
<u>NH3</u>	3,612	4,062	4,115	3,909	5,139	5,870	6,324	7,929	7,801	7,648	7,662	7,744	8,023	7,316	7,545	7,783	7,772
CaCO3		10,378	10,947	10,775	14,342	16,691	18,279	23,114	23,110	23,022	23,397	24,062	25,325	23,429	24,532	25,716	26,059
	1,098																
																	4474 966
Total Cost	3,213,541	2,890,494	3,174,253	3,315,637	3,293,139	3,220,061	3,420,826	3,441,395	3,729,543	3,396,723	<u>3,690,111</u>	3,912,987	4,105,339	3,736,383	<u>3,965,711</u>	4,030,282	4,174,266

Rith According to my understanding after talking to Zisa Bennett, Exhibits 20, 23 & 25 were not marked of admitted Lucing the hearing & are not part of the record.

FLORIDA F	UBLIC SERV	ICE COMMISSIO	N
DOCKET NO	.070052-EE		
COMPANY	Not	Admitte	¢
WITNESS	Stere	aboile	
DATE	no	+ 9	_

EXHIBIT NO.

<u>DOCKET NO:</u> 070052-EI

WITNESS: VARIOUS

PARTY: PROGRESS ENERGY FLORIDA, INC.

DESCRIPTION: STAFF'S EXHIBIT

DOCUMENTS:

Late Filed Exhibit (No. 2) of July 24, 2007 deposition of Javier Portuondo in Docket Number 070052.

## PROFFERED BY: STAFF

FLORIDA PUBLIC SERVICE COMMISSION DOCKET NO. 070052-ET HIBIT 24 Tax Impact of Different Tax Impact of Different Recovery Period COMPANY FPSC WITNESS Deferred DATE DB

## DOCKET NO. 070052 DEPOSITION J. PORTUONDO 7/24/07 LATE FILED EXHIBIT 2 PAGE 1 OF 1

## **Deferred Tax Impact of Different Recovery Periods**

	Impact to Base Rates	Base Rate Impact on WACC	Notes
Recoverable Life > Tax Life	Favorable	Decrease	
Recoverable Life < Tax Life	Detrimental	Increase	(1)
Recoverable Life = Tax Life	No Significant Impact	No Significant Impact	(2)

## Notes:

(1) This is generally the case, however, if there is a base rate case in the first year the asset goes in-service, the impact may be favorable due to regulatory lag.

(2) There will be a slight difference between the the straight line book vs. MACRS tax depreciation rates. This difference is very small and at some points will have a favorable impact on rates and at other times a detrimental impact.

Ruth According to my understanding after talking to Lisa Bennett, Exhibits 20, 23 & 25 were not marked of admitted Luring the hearing & are not part of the record.

FLORIDA F	UBLIC SERVICE COMMISSION
COMPANY	Not Hamitter
WITNESS	570 5400 540
DATE	Sue more pore

EXHIBIT NO.

DOCKET NO: 070052-EI

WITNESS: VARIOUS

PARTY: PROGRESS ENERGY FLORIDA, INC.

DESCRIPTION: STAFF'S EXHIBIT

DOCUMENTS:

Progress Energy Florida's 2006 Ten Year Site Plan.

## PROFFERED BY: STAFF

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COMPANY WITNESS		EF DOle			ePlan
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# Progress Energy Florida Ten-Year Site Plan

April 2006

2006-2015

Submitted to: Florida Public Service Commission

# **Progress Energy**

Hearing Exhibit - 000001

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## **CODE IDENTIFICATION SHEET**

## **Generating Unit Type**

ST - Steam Turbine - Non-Nuclear

NP - Steam Power - Nuclear

GT - Gas Turbine

CT - Combustion Turbine

CC - Combined cycle

SPP - Small Power Producer

COG - Cogeneration Facility

## Fuel Type

NUC - Nuclear (Uranium) NG - Natural Gas RFO - No. 6 Residual Fuel Oil DFO - No. 2 Distillate Fuel Oil BIT - Bituminous Coal MSW - Municipal Solid Waste WH - Waste Heat BIO - Biomass

## **Fuel Transportation**

WA - Water TK - Truck RR - Railroad PL - Pipeline UN - Unknown

## **Future Generating Unit Status**

A - Generating unit capability increased

FC - Existing generator planned for conversion to another fuel or energy source

P - Planned for installation but not authorized; not under construction

RP - Proposed for repowering or life extension

RT - Existing generator scheduled for retirement

T - Regulatory approval received but not under construction

U - Under construction, less than or equal to 50% complete

V - Under construction, more than 50% complete

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## **INTRODUCTION**

Section 186.801 of the Florida Statutes requires electric generating utilities to submit a Ten-Year Site Plan (TYSP) to the Florida Public Service Commission (FPSC). The TYSP includes historical and projected data pertaining to the utility's load and resource needs as well as a review of those needs. It is compiled in accordance with FPSC Rules 25-22.070 through 25.072, Florida Administrative Code.

Progress Energy Florida's (PEF's) TYSP is based on projections of long-term planning requirements that are dynamic in nature and subject to change. These planning documents should be used for general guidance concerning PEF's planning assumptions and projections, and should not be taken as an assurance that particular events discussed in the TYSP will materialize or that particular plans will be implemented. Information and projections pertinent to periods further out in time are inherently subject to greater uncertainty.

The TYSP document contains four chapters as described below:

## <u>CHAPTER 1</u> DESCRIPTION OF EXISTING FACILITIES

## CHAPTER 2

FORECAST OF ELECTRICAL POWER DEMAND AND ENERGY CONSUMPTION

## CHAPTER 3

FORECAST OF FACILITIES REQUIREMENTS

## CHAPTER 4

ENVIRONMENTAL AND LAND USE INFORMATION

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# <u>CHAPTER 1</u>

# DESCRIPTION OF EXISTING FACILITIES



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# <u>CHAPTER 1</u> DESCRIPTION OF EXISTING FACILITIES

## EXISTING FACILITIES OVERVIEW

## **OWNERSHIP**

PEF is a wholly owned subsidiary of Progress Energy, Inc. (Progress Energy). Congress enacted legislation in 2005 repealing the Public Utilities Holding Company Act of 1935 (PUCHA) effective February 8, 2006. Subsequent to that date, Progress Energy is no longer subject to regulation by the Securities and Exchange Commission as a public utility holding company. Progress Energy is the parent company of PEF and certain other subsidiaries.

## AREA OF SERVICE

PEF provided electric service during 2005 to an average of 1.6 million customers in Florida. Its service area covers approximately 20,000 square miles and includes the densely populated areas around Orlando, as well as the cities of St. Petersburg and Clearwater. PEF is interconnected with 22 municipal and 9 rural electric cooperative systems. PEF is subject to the rules and regulations of the Federal Energy Regulatory Commission (FERC) and the FPSC. PEF's Service Area is shown in Figure 1.1.

## TRANSMISSION/DISTRIBUTION

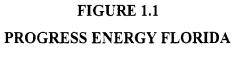
The Company is part of a nationwide interconnected power network that enables power to be exchanged between utilities. The PEF transmission system includes approximately 5,000 circuit miles of transmission lines. The distribution system includes approximately 35,000 circuit miles, with approximately 13,000 of those miles underground. A map of the Electric System can be found in Figure 1.2.

## ENERGY MANAGEMENT

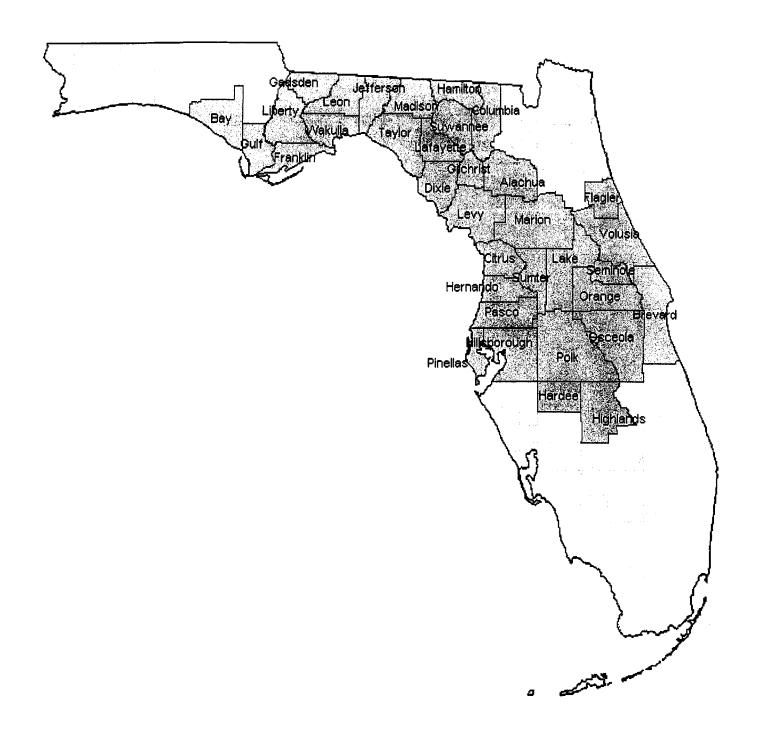
PEF customers participating in the company's residential Energy Management program help to manage future growth and costs. Approximately 345,000 customers participated in the Energy Management program at the end of 2005, contributing about 700,000 kW of winter peak-shaving capacity for use during high load periods.

## TOTAL CAPACITY RESOURCE

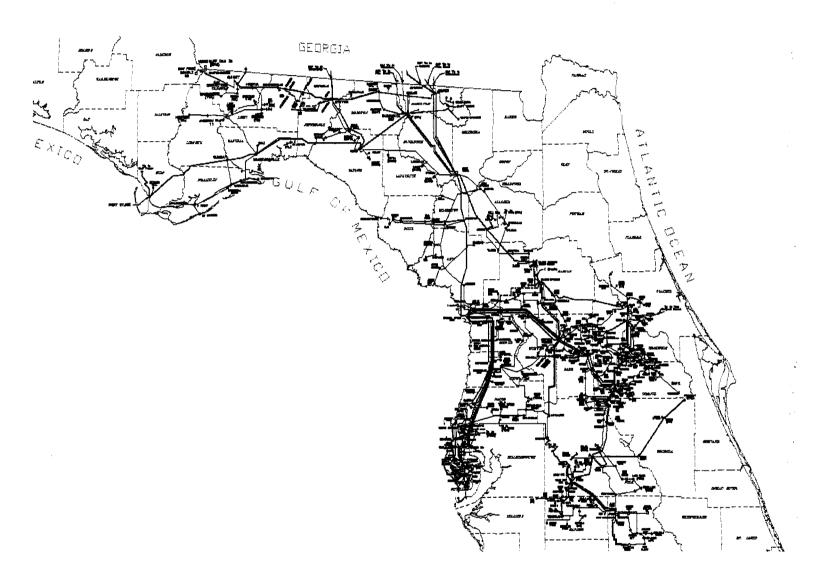
As of December 31, 2005, PEF had total summer capacity resources of approximately 10,413 MW consisting of installed capacity of 8,976 MW (excluding Crystal River 3 joint ownership) and 1,437 MW of firm purchased power. Additional information on PEF's existing generating resources is shown on Schedule 1 and Table 3.1.



Service Area Map



# FIGURE 1.2 PROGRESS ENERGY FLORIDA Electric System Map



## SCHEDULE 1 EXISTING GENERATING FACILITIES

## AS OF DECEMBER 31, 2005

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)			
									COM'L IN-	EXPECTED	GEN. MAX.	NET CAP				
	UNIT	LOCATION	UNIT		UEL		ANSPORT	ALT. FUEL	SERVICE	RETIREMENT	NAMEPLATE		WINTER			
PLANT NAME	<u>NO.</u>	(COUNTY)	<u>TYPE</u>	<u>PRI.</u>	<u>ALT.</u>	PRI.	<u>ALT.</u>	DAYS USE	MO./YEAR	MO./YEAR	<u>KW</u>	MW	MW			
STEAM	<u>.</u>	21000														
ANCLOTE	1	PASCO	ST	RFO	NG	PL	PL,		10/74		556,200	498	522			
ANCLOTE	2	PASCO	ST	RFO	NG	PL	PL		10/78		556,200	495	522			
BARTOW	1	PINELLAS	ST	RFO		WA			09/58		127,500	121	123			
BARTOW	2	PINELLAS	ST	RFO		WA			08/61		127,500	[[9	[2]			
BARTOW	3	PINELLAS	ST	RFO	NG	WA	PL		07/63		239,360	204	208			
CRYSTAL RIVER	1	CITRUS	ST	вп		WA			10/66		440,550	379	383			
CRYSTAL RIVER	2	CITRUS	ST	BIT		WA			11/69		523,800	486	491			
CRYSTAL RIVER	3 *	CITRUS	ST	NUC		ТК			03/77		890,460	769	788			
CRYSTAL RIVER	4	CITRUS	ST	BIT		WA			12/82		739,260	720	735			
CRYSTAL RIVER	5	CITRUS	ST	BIT		WA			10/84		739,260	717	732			
SUWANNEE RIVER	1	SUWANNEE	ST	RFO	NG	TK/RR	PL		11/53		34,500	32	33			
SUWANNEE RIVER	2	SUWANNEE	ST	RFO	NG	TK/RR	PL		11/54		37,500	31	32			
SUWANNEE RIVER	3	SUWANNEE	ST	RFO	NG	TK/RR	PL		10/56		75,000	<u>80</u>	81			
												4,651	4,771			
COMBINED-CYCLE																
HINES ENERGY COMPLEX	1	POLK	CC	NG	DFO	PL	ΤK	2***	04/99		\$46,550	482	529			
HINES ENERGY COMPLEX	2	POLK	CC	NG	DFO	PL	TK		12/03		598,000	516	582			
HINES ENERGY COMPLEX	3	POLK	CC	NG	DFO	PL	TK		11/05		589,900	501	576			
TIGER BAY	· 1	POLK	CC	NG		PL			08/97		278,223	207	223			
												1,706	1,910			
COMBUSTION TURBINE																
AVON PARK	PI	HIGHLANDS	GT	NG	DFO	PL	TK.	3***	12/68		33,790	26	32			
AVON PARK	P2	HIGHLANDS	GT	DFO		TK			12/68		33,790	26	32			
BARTOW	P1, P3	PINELLAS	GT	DFO		WA			05/72, 06/72		111,400	92	106			
BARTOW	P2	PINELLAS	GT	NG	DFO	PL	WA	8	06/72		55,700	46	53			
BARTOW	P4	PINELLAS	GT	NG	DFO	PL	WA	8	06/72		55,700	49	60			
BAYBORO	P1-P4	PINELLAS	GT	DFO		WA			04/73		226,800	184	232			
DEBARY	P1-P6	VOLUSIA	GT	DFO		тк			12/75-04/76		401,220	324	390			
DEBARY	P7-P9	VOLUSIA	GT	NG	DFO	PL	ΤK	8	10/92		345,000	258	279			
DEBARY	<b>P10</b>	VOLUSIA	GT	DFO		ΤK			10/92		115,000	85	93			
HIGGINS	P -P2	PINELLAS	GT	NG	DFO	PL	ŤΚ		03/69, 04/69		67,580	54	64			
HIGGINS	P3-P4	PINELLAS	GŤ	NG	DFO	PL	TK	1	12/70,01/71		85,850	68	70			
INTERCESSION CITY	P1-P6	OSCEOLA	GT	DFO		PL,TK			05/74		340,200	294	366			
INTERCESSION CITY	P7-P10	OSCEOLA	GT	NG	DFO	PL	PL,TK	5	10/93		460,000	352	376			
INTERCESSION CITY	P11 **	OSCEOLA	GT	DFO		PL,TK			01/97		165,000	143	170			
INTERCESSION CITY	P12-P14	OSCEOLA	GT	NG	DFO	PL	PL,TK	5	12/00		345,000	252	294			
RIO PINAR	Pl	ORANGE	GT	DFO		тк			11/70		19,290	13	16			
SUWANNEE RIVER	P1, P3	SUWANNEE	GT	NG	DFO	PL	TK	9***	10/80, 11/80		122,400	110	134			
SUWANNEE RIVER	P2	SUWANNEE	GT	DFO		тк			10/80		61,200	54	67			
TURNER	P1-P2	VOLUSIA	GT	DFO		тк			10/70		38,580	26	32			
TURNER	P3	VOLUSIA	GT	DFO		TK			08/74		71,200	65	82			
TURNER	P4	VOLUSIA	GT	DFO		тк			08/74		71,200	53	80			
UNIV. OF FLA.	PI	ALACHUA	GT	NG		PL			01/94		43,000	35	<u>41</u>			
												2,619	3,069			
<ul> <li>REPRESENTS APPROXIMATELY 91 8</li> </ul>	% PEF OWNE	RSHIP OF UNIT														
** SUMMER CAPABILITY (JUNE THROU	ОН ЅЕРТЕМВ	ER) OWNED BY GEO	RGIA 70%	ER COMP	ANY					TOTAL RES	OURCES (MW)	8,976	9,750			
*** FOR ENTIRE PLANT								··· FOR ENTIRE PLANT								

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# CHAPTER 2

# FORECAST OF ELECTRIC POWER DEMAND AND ENERGY CONSUMPTION



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# CHAPTER 2 FORECAST OF ELECTRIC POWER DEMAND AND ENERGY CONSUMPTION

## **OVERVIEW**

The following Schedules 2, 3 and 4 represent PEF's history and forecast of customers, energy sales (GWh), and peak demand (MW). High and low scenarios are also presented for sensitivity purposes.

The base case was developed using assumptions to predict a forecast with a 50/50 probability, or most likely scenario. The high and low scenarios, which have a 90/10 probability of occurrence or an 80 percent probability of an outcome falling between the high and low cases, employed a Monte Carlo simulation procedure that studied 1,000 possible outcomes of retail demand and energy.

PEF's customer growth is expected to average 1.7 percent between 2006 and 2015, less than the ten-year historical average of 2.3 percent. The ten-year historical growth rate falls to 2.0 percent when accounting for the creation of PEF's Seasonal Service Rate tariff, which artificially inflates customer growth figures. Slower population growth - based on the latest projection from the University of Florida's Bureau of Economic and Business Research – and economic conditions less favorable for the housing/construction industry (higher interest rates) result in a lower base case customer projection when compared to the higher historical growth rate. This translates into lower projected energy and demand growth rates from historic rate levels.

Net energy for load (NEL), which had grown at an average of 3.4 percent between 1996 and 2005, is expected to increase by 2.6 percent per year from 2006-2015 in the base case, 2.8 percent in the high case and 2.3 percent in the low case. A lower contribution from the wholesale jurisdiction, which grew an average of 10.7 percent between 1996 and 2005, results in lower expected system growth going forward than the historic rate. Retail NEL, which grew at a

2.7 percent average rate historically, is expected to grow 2.5 percent over the next ten years. Wholesale NEL is expected to average 3.3 percent between 2006 and 2015.

Summer net firm demand is expected to grow an average of 2.6 percent per year during the next ten years. This compares to the 4.5% growth rate experienced throughout the last ten years. Again, lower contribution from the wholesale jurisdiction is expected going forward. High and low summer growth rates for net firm demand are 2.9 percent and 2.3 percent per year, respectively. Winter net firm demand is projected to grow at 2.8 percent per year after having increased by 0.3 percent per year from 1996 to 2005. The low historical growth figure is driven by an extreme weather peak day in 1996. High and low winter net firm demand growth rates are 3.1 percent and 2.6 percent, respectively.

Summer net firm retail demand is expected to grow an average of 2.5 percent per year during the next ten years; this compares to the 4.7 percent average annual growth rate experienced throughout the last ten years. The historical growth percentage is driven by an extremely hot 2005 peak day condition. High and low summer growth rates for net firm retail demand are 2.8 percent and 2.2 percent per year, respectively. Winter net firm retail demand is projected to grow at approximately 2.1 percent per year after having grown by 0.4% from 1996 to 2005. Again, an extremely cold 1996 peak day causes this anomaly. High and low winter net firm retail demand growth rates are 2.5 percent and 1.8 percent, respectively.

2-2

## ENERGY CONSUMPTION AND DEMAND FORECAST SCHEDULES

<b>SCHEDULE</b>	DESCRIPTION
2.1, 2.2 and 2.3	History and Forecast of Energy Consumption and Number of
	Customers by Customer Class
3.1.1, 3.1.2 and 3.1.3	History and Forecast of Base, High and Low Summer Peak
	Demand (MW)
3.2.1, 3.2.2 and 3.2.3	History and Forecast of Base, High, and Low Winter Peak
	Demand (MW)
3.3.1, 3.3.2 and 3.3.3	History and Forecast of Base, High and Low Annual Net Energy
	for Load (GWh)
4	Previous Year Actual and Two-Year Forecast of Peak Demand and
	Net Energy for Load by Month

## SCHEDULE 2.1 HISTORY AND FORECAST OF ENERGY CONSUMPTION AND NUMBER OF CUSTOMERS BY CUSTOMER CLASS

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
		RURAI	COMMERCIAL					
	PEF	MEMBERS PER		A VERAGE NO. OF	A VERAGE KWh CONSUMPTION		AVERAGE NO. OF	AVERAGE KWh CONSUMPTION
YEAR	POPULATION	HOUSEHOLD	GWh 	CUSTOMERS	PER CUSTOMER	GWh	CUSTOMERS	PER CUSTOMER
1996	2,847,802	2.494	15,481	1,141,671	13,560	8,848	129,440	68,356
1997	2,895,266	2.495	15,080	1,160,611	12,993	9,257	132,504	69,862
1998	2,959,509	2.502	16,526	1,182,786	13,972	9,999	136,345	73,336
1999	3,047,293	2.511	16,245	1,213,470	13,387	10,327	140,897	73,295
2000	3,044,449	2.467	17,116	1,234,286	13,867	10,813	143,475	75,368
2001	3,141,867	2.465	17,604	1,274,672	13,810	11,061	146,983	75,251
2002	3,207,661	2.465	18,754	1,301,515	14,409	11,420	150,577	75,842
2003	3,286,782	2.468	19,429	1,331,914	14,587	11,553	154,294	74,876
2004	3,348,630	2.454	19,347	1,364,677	14,177	11,734	158,780	73,898
2005	3,425,783	2.452	19,894	1,397,012	14,240	11,945	161,001	74,190
2006	3,473,481	2.447	20,187	1,419,449	14,222	11,899	163,107	72,952
2007	3,530,429	2.441	20,731	1,446,239	14,334	12,292	166,477	73,836
2008	3,585,407	2.435	21,244	1,472,551	14,427	12,725	169,784	74,947
2009	3,639,074	2.428	21,789	1,498,885	14,537	13,155	173,090	75,998
2010	3,690,763	2.420	22,316	1,524,944	14,634	13,559	176,360	76,880
2011	3,740,415	2.412	22,839	1,550,477	14,730	13,966	179,611	77,759
2012	3,788,512	2.404	23,353	1,575,780	14,820	14,370	182,781	78,618
2013	3,835,918	2.396	23,882	1,600,906	14,918	14,785	185,927	79,519
2014	3,883,825	2.389	24,411	1,625,899	15,014	15,204	189,055	80,419
2015	3,932,139	2.382	24,949	1,650,873	15,113	15,629	192,181	81,323

.

## SCHEDULE 2.2 HISTORY AND FORECAST OF ENERGY CONSUMPTION AND NUMBER OF CUSTOMERS BY CUSTOMER CLASS

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
		INDUSTRIAL					
YEAR	GWh	AVERAGE NO. OF CUSTOMERS	AVERAGE KWh CONSUMPTION PER CUSTOMER	RAILROADS AND RAILWAYS GWh	STREET & HIGHWAY LIGHTING GWh	OTHER SALES TO PUBLIC AUTHORITIES GWh	TOTAL SALES TO ULTIMATE CONSUMERS GWh
			******************************				
1996	4,224	2,927	1,443,116	0	26	2,205	30,784
1997	4,188	2,830	1,479,859	0	27	2,299	30,851
1998	4,375	2,707	1,616,180	0	27	2,459	33,386
1999	4,334	2,629	1,648,536	0	27	2,509	33,442
2000	4,249	2,535	1,676,134	0	28	2,626	34,832
2001	3,872	2,551	1,517,836	0	28	2,698	35,263
2002	3,835	2,535	1,512,821	0	28	2,822	36,859
2003	4,001	2,643	1,513,810	0	29	2,946	37,957
2004	4,069	2,733	1,488,840	0	28	3,016	38,193
2005	4,140	2,703	1,531,632	0	27	3,171	39,178
2006	4,152	2,687	1,545,218	0	28	3,209	39,475
2007	4,213	2,687	1,567,920	0	28	3,327	40,591
2008	4,383	2,687	1,631,187	0	28	3,436	41,816
2009	4,416	2,687	1,643,469	0	28	3,547	42,935
2010	4,453	2,687	1,657,239	0	28	3,651	44,006
2011	4,491	2,687	1,671,381	0	28	3,756	45,081
2012	4,539	2,687	1,689,245	0	28	3,861	46,150
2013	4,579	2,687	1,704,131	0	28	3,968	47,241
2014	4,622	2,687	1,720,134	0	28	4,076	48,341
2015	4,662	2,687	1,735,020	1	28	4,186	49,456

## SCHEDULE 2.3 HISTORY AND FORECAST OF ENERGY CONSUMPTION AND NUMBER OF CUSTOMERS BY CUSTOMER CLASS

(1)	(2)	(3)	(4)	(5)	(6)
	SALES FOR RESALE	UTILITY USE & LOSSES	NET ENERGY FOR LOAD	OTHER CUSTOMERS	TOTAL NO. OF
YEAR	GWh	GWh	GWh	(AVERAGE NO.)	CUSTOMERS
1996	2,089	1,842	34,715	18,035	1,292,073
1997	1,758	1,996	34,605	18,562	1,314,507
1 <b>998</b>	2,340	2,037	37,763	19,013	1,340,851
1999	3,267	2,451	39,160	19,601	1,376,597
2000	3,732	2,678	41,242	20,004	1,400,299
2001	3,839	1,831	40,933	20,752	1,444,958
2002	3,173	2,534	42,567	21,155	1,475,783
2003	3,359	2,595	43,911	21,665	1,510,516
2004	4,301	2,773	45,268	22,437	1,548,627
2005	5,195	2,505	46,878	22,701	1,583,417
2006	4,038	2,654	46,167	23,160	1,608,403
2007	4,430	2,739	47,759	23,719	1,639,122
2008	4,410	2,850	49,076	24,279	1,669,301
2009	4,323	2,890	50,148	24,837	1,699,499
2010	4,958	3,042	52,006	25,388	1,729,379
2011	5,083	3,055	53,219	25,933	1,758,708
2012	5,159	3,125	54,434	26,474	1,787,722
2013	5,263	3,199	55,704	27,008	1,816,528
2014	5,343	3,265	56,948	27,537	1,845,178
2015	5,419	3,337	58,211	28,059	1,873,800

## SCHEDULE 3.1.1 HISTORY AND FORECAST OF SUMMER PEAK DEMAND (MW) BASE CASE

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(OTH)
YEAR	TOTAL	WHOLESALE	RETAIL	NTERRUPTIBLE	RESIDENTIAL LOAD MANAGEMENT	RESIDENTIAL CONSERVATION	COMM. / IND. LOAD MANAGEMENT	COMM. / IND. CONSERVATION	OTHER DEMAND REDUCTIONS
1996	7,470	828	6,642	309	565	69	41	120	167
1997	7,786	874	6,912	288	555	78	41	131	170
1998	8,367	943	7,424	291	438	97	42	142	182
1999	9,039	1,326	7,713	292	505	113	45	153	183
2000	8,911	1,319	7,592	277	455	127	48	155	75
2001	8,841	1,117	7,724	283	414	139	54	156	75
2002	9,421	1,203	8,218	305	390	153	43	159	75
2003	8,886	887	7,999	300	347	172	44	164	75
2004	9,554	1,071	8,483	531	283	188	37	166	75
2005	10,316	1,118	9,198	393	250	203	38	167	75
2006	9,915	1,105	8,810	419	228	214	39	169	75
2007	10,226	1,181	9,044	431	202	223	40	171	75
2008	10,487	1,223	9,264	437	179	232	41	172	75
2009	10,676	1,201	9,475	433	158	24 i	42	174	75
2010	11,039	1,357	9,681	424	140	250	43	176	75
2011	11,260	1,372	9,888	425	124	259	45	177	75
2012	11,487	1,396	10,091	426	109	269	46	179	75
2013	11,699	1,406	10,293	427	97	279	47	180	75
2014	11,921	1,429	10,492	428	86	289	48	182	75
2015	12,139	1,446	10,693	429	76	293	48	183	75

#### Historical Values (1996 - 2005):

Col. (2) = recorded peak + implemented load control + residential and commercial/industrial conservation and customer-owned self-service cogeneration. Cols. (5) - (9) = cumulative conservation and load control capabilities at peak. Col. (8) includes commercial load management and standby generation. Col. (OTH) = voltage reduction and customer-owned self-service cogeneration.

Col. (10) = (2) - (5) - (6) - (7) - (8) - (9) - (OTH).

Projected Values (2006 - 2015):

Cols. (2) - (4) = forecasted peak without load control, conservation, and customer-owned self-service cogeneration.

Cols. (5) = (9) = cumulative conservation and load control capabilities at peak. Col. (8) includes commercial load management and standby generation.

Col. (OTH) = customer-owned self-service cogeneration.

Col. (10) = (2) - (5) - (6) - (7) - (8) - (9) - (OTH).

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#### SCHEDULE 3.1.2 HISTORY AND FORECAST OF SUMMER PEAK DEMAND (MW) HIGH LOAD FORECAST

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(OTH)
YEAR	TOTAL	WHOLESALE	RETAIL	INTERRUPTIBLE	RESIDENTIAL LOAD MANAGEMENT	RESIDENTIAL CONSERVATION	COMM. / IND. LOAD MANAGEMENT	COMM. / IND. CONSERVATION	OTHER DEMAND REDUCTIONS
1996	7,470	828	6,642	309	565	69	41	120	167
1997	7,786	874	6,912	288	555	78	41	131	170
1998	8,367	943	7,424	291	438	97	42	142	182
1999	9,039	1,326	7,713	292	505	113	45	153	183
2000	8,911	1,319	7,592	277	455	127	48	155	75
2001	8,841	1,117	7,724	283	414	139	54	156	75
2002	9,421	1,203	8,218	305	390	153	43	159	75
2003	8,886	887	7,999	300	347	172	44	164	75
2004	9,554	1.071	8,483	531	283	188	37	166	75
2005	10,316	1,118	9,198	393	250	203	38	167	75
2006	10,083	1,105	8,977	419	228	214	39	169	75
2007	10,413	1,181	9,232	431	202	223	40	171	75
2008	10,699	1,223	9,476	437	179	232	41	172	75
2009	10,913	1,201	9,712	433	158	241	42	174	75
2010	11,294	1,357	9,937	424	140	250	43	176	75
2011	11,531	1,372	10,159	425	124	259	45	177	75
2012	11,798	1,396	10,402	426	109	269	46	179	75
2013	12,059	1,406	10,653	427	97	279	47	180	75
2014	12,320	1,429	10,891	428	86	289	48	182	75
2015	12,615	1,446	11,169	429	76	293	48	183	75

#### Historical Values (1996 - 2005):

Col. (2) = recorded peak + implemented load control + residential and commercial/industrial conservation and customer-owned self-service cogeneration. Cols. (5) - (9) = cumulative conservation and load control capabilities at peak. Col. (8) includes commercial load management and standby generation. Col. (OTH) = voltage reduction and customer-owned self-service cogeneration.

Col.  $(10) = (2) \cdot (5) \cdot (6) \cdot (7) \cdot (8) \cdot (9) \cdot (OTH)$ .

Projected Values (2006 - 2015):

Cols. (2) - (4) = forecasted peak without load control, conservation, and customer-owned self-service cogeneration.

Cols. (5) - (9) = cumulative conservation and load control capabilities at peak. Col. (8) includes commercial load management and standby generation.

Col. (OTH) = customer-owned self-service cogeneration.

Col. (10) = (2) - (5) - (6) - (7) - (8) - (9) - (OTH).

## SCHEDULE 3.1.3 HISTORY AND FORECAST OF SUMMER PEAK DEMAND (MW) LOW LOAD FORECAST

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(OTH)
YEAR	TOTAL	WHOLESALE	RETAIL	INTERRUPTIBLE	RESIDENTIAL LOAD MANAGEMENT	RESIDENTIAL CONSERVATION	COMM. / IND. LOAD MANAGEMENT	COMM. / IND. CONSERVATION	OTHER DEMAND REDUCTIONS
1996	7,470	828	6,642	309	565	69	41	120	167
1990	7,786	874	6,912	288	555	78	41	131	170
1998	8,367	943	7,424	291	438	97	42	142	182
1999	9,039	1,326	7,713	292	505	113	45	153	183
2000	8,911	1,319	7,592	277	455	127	48	155	75
2001	8,841	1,117	7,724	283	414	139	54	156	75
2002	9,421	1.203	8,218	305	390	153	43	159	75
2003	8,886	887	7,999	300	347	172	44	164	75
2004	9,554	1.071	8,483	531	283	188	37	166	75
2005	10,316	1,118	9,198	393	250	203	38	167	75
2006	9,747	1,105	8,641	419	228	214	39	169	75
2007	10,056	1,181	8,875	431	202	223	40	171	75
2008	10,293	1,223	9,070	437	179	232	41	172	75
2009	10,473	1,201	9.272	433	158	241	42	174	75
2010	10,788	1,357	9,431	424	140	250	43	176	75
2011	10,975	1,372	9,603	425	124	259	45	177	75
2012	11,162	1,396	9,766	426	109	269	46	179	75
2013	11,332	1,406	9,926	427	97	279	47	180	75
2014	11,521	1,429	10,092	428	86	289	48	182	75
2015	11,670	1,446	10,224	429	76	293	48	183	75

Historical Values (1996 - 2005):

Col. (2) = recorded peak + implemented load control + residential and commercial/industrial conservation and customer-owned self-service cogeneration. Cols. (5) - (9) = cumulative conservation and load control capabilities at peak. Col. (8) includes commercial load management and standby generation. Col. (OTH) = voltage reduction and customer-owned self-service cogeneration.

Col.  $(10) = (2) \cdot (5) - (6) \cdot (7) - (8) - (9) \cdot (OTH)$ .

Projected Values (2006 - 2015):

Cols. (2) - (4) = forecasted peak without load control, conservation, and customer-owned self-service cogeneration.

Cols. (5) - (9) = cumulative conservation and load control capabilities at peak. Col. (8) includes commercial load management and standby generation.

Col. (OTH) = customer-owned self-service cogeneration.

Col. (10) = (2) - (5) - (6) - (7) - (8) - (9) - (OTH).

#### SCHEDULE 3.2.1 HISTORY AND FORECAST OF WINTER PEAK DEMAND (MW) BASE CASE

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(OTH)
YEAR	TOTAL	WHOLESALE	RETAIL	INTERRUPTIBLE	RESIDENTIAL LOAD MANAGEMENT	RESIDENTIAL CONSERVATION	COMM. / IND. LOAD MANAGEMENT	COMM. / IND. CONSERVATION	OTHER DEMAND REDUCTIONS
1995/96	10,562	1,489	9,073	255	1,156	106	15	95	201
1996/97	8,486	1,235	7,251	290	917	133	16	104	190
1997/98	7,752	941	6,811	318	663	164	17	112	168
1998/99	10,473	1,741	8,732	305	874	196	18	117	187
1999/00	10.040	1,728	8,312	225	849	229	20	119	182
2000/01	11,450	1,984	9,466	255	809	254	29	120	194
2001/02	10.676	1,624	9,052	285	770	278	24	121	188
2002/03	11,555	1,538	10,017	271	768	313	27	124	201
2003/04	9,290	1,167	8,123	498	761	343	24	125	227
2004/05	10,798	1,602	9,196	350	725	371	26	125	247
2005/06	10.987	1,413	9,574	430	696	405	28	127	254
2005/07	11.525	1,740	9,786	426	671	429	30	128	258
2007/08	11,750	1,734	10,016	444	649	453	31	130	262
2008/09	12,113	1,894	10,220	440	631	479	33	132	265
2009/10	12,514	2,088	10,426	432	615	506	35	133	269
2010/11	12,742	2,112	10,629	434	603	534	37	135	272
2011/12	13,019	2,191	10,828	435	593	566	38	136	276
2012/13	13,278	2,253	11,025	436	586	597	40	138	279
2013/14	13,537	2,314	11,223	437	581	628	42	139	282
2014/15	13,776	2,358	11,418	438	577	660	42	141	285

#### Historical Values (1996 - 2005):

Col. (2) = recorded peak + implemented load control + residential and commercial/industrial conservation and customer-owned self-service cogeneration.

Cols. (5) - (9) = cumulative conservation and load control capabilities at peak. Col. (8) includes commercial load management and standby generation.

Col. (OTH) = voltage reduction and customer-owned self-service cogeneration.

Col. (10) = (2) - (5) - (6) - (7) - (8) - (07H).

Projected Values (2006 - 2015):

Cols. (2) • (4) = forecasted peak without load control, conservation, and customer-owned self-service cogeneration.

Cols. (5) - (9) = cumulative conservation and load control capabilities at peak. Col. (8) includes commercial load management and standby generation.

Col. (OTH) = voltage reduction and customer-owned self-service cogeneration.

Col. (10) = (2) - (5) - (6) - (7) - (8) - (9) - (OTH).

#### SCHEDULE 3.2. HISTORY AND FORECAST OF WINTER PEAK DEMAND (MW) HIGH LOAD FORECAST

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(OTH)
YEAR	TOTAL	WHOLESALE	RETAIL	INTERRUPTIBLE	RESIDENTIAL LOAD MANAGEMENT	, RESIDENTIAL CONSERVATION	COMM. / IND. LOAD MANAGEMENT	COMM. / IND. CONSERVATION	OTHER DEMAND REDUCTIONS
1995/96	10,562	1,489	9,073	255	1.156	106	15	95	201
1996/97	8.486	1,235	7,251	290	917	133	16	104	190
1997/98	7,752	941	6,811	318	663	164	17	112	168
1998/99	10,473	1,741	8,732	305	874	196	18	117	187
1999/00	10,040	1,728	8,312	225	849	229	20	119	182
2000/01	11,450	1,984	9,466	255	809	254	29	120	194
2001/02	10,676	1,624	9,052	285	770	278	24	121	188
2002/03	11,555	1,538	10,017	271	768	313	27	124	201
2003/04	9,290	1,167	8,123	498	761	343	24	125	227
2004/05	10,798	1,602	9,196	350	725	371	26	125	247
2005/06	11,167	1,413	9,755	430	696	405	28	127	254
2006/07	11,725	1,740	9,986	426	671	429	30	128	258
2007/08	11,975	1,734	10,240	444	649	453	31	130	262
2008/09	12,364	1,894	10,470	440	631	479	33	132	265
2009/10	12,785	2,088	10,697	432	615	506	35	133	269
2010/11	13,026	2,112	10,913	434	603	534	37	135	272
2011/12	13,345	2,191	11,154	435	593	566	38	136	276
2012/13	13,656	2,253	11,403	436	586	597	40	138	279
2013/14	13,954	2,314	11,640	437	581	628	42	139	282
2014/15	14,272	2,358	11,914	438	577	660	42	141	285

#### Historical Values (1996 - 2005):

Col. (2) = recorded peak + implemented load control + residential and commercial/industrial conservation and customer-owned self-service cogeneration.

Cols. (5) - (9) = cumulative conservation and load control capabilities at peak. Col. (8) includes commercial load management and standby generation.

Col. (OTH) = voltage reduction and customer-owned self-service cogeneration.

Col. (10) = (2) - (5) - (6) - (7) - (8) - (9) - (OTH).

Projected Values (2006 - 2015):

Cols. (2) - (4) = forecasted peak without load control, conservation, and customer-owned self-service cogeneration.

Cols. (5) - (9) = cumulative conservation and load control capabilities at peak. Col. (8) includes commercial load management and standby generation.

Col. (OTH) = voltage reduction and customer-owned self-service cogeneration.

Col.  $(10) = (2) \cdot (5) - (6) - (7) - (8) - (9) - (OTH)$ .

#### SCHEDULE 3.2.3 HISTORY AND FORECAST OF WINTER PEAK DEMAND (MW) LOW LOAD FORECAST

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(OTH)
YEAR	TOTAL	WHOLESALE	RETAIL	INTERRUPTIBLE	RESIDENTIAL LOAD MANAGEMENT	RESIDENTIAL CONSERVATION	COMM. / IND. LOAD MANAGEMENT	COMM. / IND. CONSERVATION	OTHER DEMAND REDUCTIONS
				• ••••••••					#### <b>#</b> ###############################
1995/96	10,562	1,489	9,073	255	1,156	106	15	95	201
1996/97	8,486	1,235	7,251	290	917	133	16	104	190
1997/98	7,752	941	6,811	318	663	164	17	112	168
1998/99	10,473	1,741	8,732	305	874	196	18	117	187
1999/00	10,040	1,728	8,312	225	849	229	20	119	182
2000/01	11,450	1,984	9,466	255	809	254	29	120	194
2001/02	10,676	1,624	9,052	285	770	278	24	121	188
2002/03	11,555	1,538	10,017	271	768	313	27	124	201
2003/04	9,290	1,167	8,123	498	761	343	24	125	227
2004/05	10,798	1,602	9,196	350	725	371	26	125	247
2005/06	10,806	1,413	9,394	430	696	405	28	127	254
2006/07	11,344	1,740	9,605	426	671	429	30	128	258
2007/08	11,542	1,734	9,807	444	649	453	31	130	262
2008/09	11,897	1,894	10,003	440	631	479	33	132	265
2009/10	12,249	2,088	10,161	432	615	506	35	133	269
2010/11	12,441	2,112	10,328	434	603	534	37	135	272
2011/12	12,677	2,191	10,486	435	593	566	38	136	276
2012/13	12,894	2,253	10,641	436	586	597	40	138	279
2013/14	13,120	2,314	10,806	437	581	628	42	139	282
2014/15	13,290	2,358	10,932	438	577	660	42	141	285

#### Historical Values (1996 - 2005):

Col. (2) = recorded peak + implemented load control + residential and commercial/industrial conservation and customer-owned self-service cogeneration. Cols. (5) - (9) = cumulative conservation and load control capabilities at peak. Col. (8) includes commercial load management and standby generation.

Col. (OTH) = voltage reduction and customer-owned self-service cogeneration.

Col. (10) = (2) - (5) - (6) - (7) - (8) - (9) - (OTH).

Projected Values (2006 - 2015):

Cols. (2) - (4) = forecasted peak without load control, conservation, and customer-owned self-service cogeneration.

Cols. (5) - (9) = cumulative conservation and load control capabilities at peak. Col. (8) includes commercial load management and standby generation.

Col. (OTH) = voltage reduction and customer-owned self-service cogeneration.

Col.  $(10) = (2) \cdot (5) \cdot (6) \cdot (7) \cdot (8) \cdot (9) \cdot (OTH)$ .

## SCHEDULE 3.3.1 HISTORY AND FORECAST OF ANNUAL NET ENERGY FOR LOAD (GWh) BASE CASE

(1)	(2)	(3)	(4)	(OTH)	(5)	(6)	(7)	(8)	(9)
YEAR	TOTAL	RESIDENTIAL CONSERVATION	COMM. / IND. CONSERVATION	OTHER ENERGY REDUCTIONS*	RETAIL	WHOLESALE	UTILITY USE & LOSSES	NET ENERGY FOR LOAD	LOAD FACTOR (%) **
1996	35,812	249	285	562	30,785	2,089	1,841	34,715	44.9
1997	35,753	268	317	563	30,850	1,758	1,997	34,605	49.0
1998	38,950	289	333	565	33,387	2,340	2,036	37,763	53.9
1999	40,376	312	339	565	33,441	3,267	2,452	39,160	50.0
2000	42,486	334	345	565	34,832	3,732	2,678	41,242	50.5
2001	42,200	354	349	564	35,263	3,839	1,831	40,933	47.5
2002	43,860	377	352	564	36,859	3,173	2,535	42,567	50.0
2003	45,232	400	357	564	37,957	3,359	2,595	43,911	47.7
2004	46,617	424	360	565	38,193	4,301	2,774	45,268	56.5
2005	48,250	445	363	564	39,177	5,195	2,506	46,878	52.3
2006	47,556	459	365	564	39,475	4,038	2,654	46,167	58,3
2007	49,165	474	368	564	40,591	4,430	2,738	47,759	56.9
2008	50,501	489	371	565	41,816	4,410	2,850	49,076	57.1
2009	51,590	504	374	564	42,935	4,323	2,890	50,148	56.5
2010	53,466	519	377	564	44,006	4,958	3,042	52,006	56.4
2011	54,699	536	380	564	45,081	5,083	3,055	53,219	56.6
2012	55,934	552	383	565	46,150	5,159	3,125	54,434	56.5
2013	57,222	568	386	564	47,242	5,263	3,199	55,704	56.8
2014	58,485	585	389	564	48,341	5,343	3,264	56,948	56.9
2015	59,749	585	389	564	49,455	5,419	3,337	58,211	57.1

\* Column (OTH) includes Conservation Energy For Lighting and Public Authority Customers, Customer-Owned Self-service Cogeneration and Load Control Programs.

\*\* Load Factors for historical years are calculated using the actual winter peak demand except the 1998 and 2004 historical load factors which are based on the actual summer peak demand.

Load Factors for future years are calculated using the net firm winter peak demand (Schedule 3.2.1)

## SCHEDULE 3.3.2 HISTORY AND FORECAST OF ANNUAL NET ENERGY FOR LOAD (GWh) HIGH LOAD FORECAST

(1)	(2)	(3)	(4)	(OTH)	(5)	(6)	(7)	(8)	(9)
YEAR	TOTAL	RESIDENTIAL CONSERVATION	COMM. / IND. CONSERVATION	OTHER ENERGY REDUCTIONS*	RETAIL	WHOLESALE	UTILITY USE & LOSSES	NET ENERGY FOR LOAD	LOAD FACTOR (%) **
1996	35,812	249 268	285 317	562 563	30,785	2,089	1,841 1,997	34,715	44.9
1997 1998	35,753 38,950	288	333	565	30,850 33,387	1,758 2,340	2,036	34,605 37,763	49.0 53.9
1999	40.376	312	339	565	33,441	3,267	2,452	39,160	50.0
2000	42,486	334	345	565	34,832	3,732	2,678	41,242	50.5
2001	42,200	354	349	564	35,263	3,839	1,831	40,933	47.5
2002	43,860	377	352	564	36,859	3,173	2,535	42,567	50.0
2003	45,232	400	357	564	37,957	3,359	2,595	43,911	47,7
2004	46,617	424	360	565	38,193	4,301	2,774	45,268	56.5
2005	48,250	445	363	564	39,177	5,195	2,506	46,878	52.3
2006	48,533	459	365	564	40,256	4,038	2,850	47,144	58.3
2007	50,099	474	368	564	41,464	4,430	2,799	48,693	56.8
2008	51,560	489	371	565	42,807	4,410	2,918	50,135	57.1
2009	52,777	504	374	564	44,047	4,323	2,965	51,335	56.4
2010	54,760	519	377	564	45,220	4,958	3,122	53,300	56,4
2011	56,076	536	380	564	46,369	5,083	3,144	54,596	56.6
2012	57,522	552	383	565	47,633	5,159	3,230	56,022	56,4
2013	59,068	568	386	564	48,970	5,263	3,317	57,550	56.7
2014	60,550	585	389	564	50,266	5,343	3,404	59,013	56.9
2015	62,217	585	389	564	51,768	5,419	3,492	60,679	57.1

\* Column (OTH) includes Conservation Energy For Lighting and Public Authority Customers, Customer-Owned Self-service Cogeneration and Load Control Programs.

\*\* Load Factors for historical years are calculated using the actual winter peak demand except the 1998 and 2004 historical load factors which are based on the actual summer peak demand.

Load Factors for future years are calculated using the net firm winter peak demand (Schedule 3.2.2)

## SCHEDULE 3.3.3 HISTORY AND FORECAST OF ANNUAL NET ENERGY FOR LOAD (GWh) LOW LOAD FORECAST

		(8)	(9)
	UTILITY USE & LOSSES	NET ENERGY FOR LOAD	LOAD FACTOR (%) **
1996 35,812 249 285 562 30,785 2,089	1,841	34,715	44.9
1997 35,753 268 317 563 30,850 1,758	1,997	34,605	49.0
1998 38,950 289 333 565 33,387 2,340	2,036	37,763	53.9
1999 40,376 312 339 565 33,441 3,267	2,452	39,160	50.0
2000 42,486 334 345 565 34,832 3,732	2,678	41,242	50.5
2001 42,200 354 349 564 35,263 3,839	1,831	40,933	47.5
2002 43,860 377 352 564 36,859 3,173	2,535	42,567	50.0
2003 45,232 400 357 564 37,957 3,359	2,595	43,911	47.7
2004 46,617 424 360 565 38,193 4,301	2,774	45,268	56.5
2005 48,250 445 363 564 39,177 5,195	2,506	46,878	52.3
2006 46,765 459 365 564 38,666 4,038	2,672	45,376	58.4
2007 48,293 474 368 564 39,776 4,430	2,681	46,887	56.9
2008 49,496 489 371 565 40,873 4,410	2,788	48,071	57.2
2009 50,528 504 374 564 41,946 4,323	2,817	49,086	56.5
2010 52,169 519 377 564 42,793 4,958	2,958	50,709	56.4
2011 53,220 536 380 564 43,699 5,083	2,958	51,740	56.6
2012 54,242 552 383 565 44,566 5,159	3,017	52,742	56.5
2013 55,309 568 386 564 45,450 5,263	3,078	53,791	56.8
2014 56,389 585 389 564 46,383 5,343	3,126	54,852	56.9
2015 57,307 585 389 564 47,160 5,419	3,190	55,769	57.1

\* Column (OTH) includes Conservation Energy For Lighting and Public Authority Customers, Customer-Owned Self-service Cogeneration and Load Control Programs.

\*\* Load Factors for historical years are calculated using the actual winter peak demand except the 1998 and 2004 historical load factors which are based on the actual summer peak demand.

Load Factors for future years are calculated using the net firm winter peak demand (Schedule 3.2.3)

## SCHEDULE 4

## PREVIOUS YEAR ACTUAL AND TWO-YEAR FORECAST OF PEAK DEMAND AND NET ENERGY FOR LOAD BY MONTH

(1)	(2)	(3)	(4)	(5)	(6)	(7)
	ACTU	JAL	FOREC	AST	FOREC	AST
	200	5	2006	5	200	7
	PEAK		PEAK		PEAK	
	DEMAND	NEL	DEMAND	NEL	DEMAND	NEL
MONTH	MW	GWh	MW	GWh	MW	GWh
JANUARY	10,226	3,582	9,047	3,566	9,584	3,724
FEBRUARY	7,398	3,106	6,992	3,133	7,455	3,273
MARCH	7,609	3,592	6,008	3,337	6,501	3,552
APRIL	7,011	3,283	6,970	3,284	7,467	3,438
MAY	8,478	3,923	8,025	4,041	8,511	4,190
JUNE	8,927	4,215	8,595	4,337	8,914	4,450
JULY	9,671	4,947	8,754	4,731	9,044	4,863
AUGUST	9,681	5,031	8,771	4,748	9,084	4,885
SEPTEMBER	9,090	4,461	8,184	4,308	8,488	4,433
OCTOBER	8,301	3,968	7,692	3,837	7,963	3,952
NOVEMBER	6,424	3,215	6,282	3,267	6,573	3,347
DECEMBER	7,772	3,555	7,767	3,578	7,860	3,652
TOTAL		46,878		46,167		47,759

## FUEL REQUIREMENTS AND ENERGY SOURCES

PEF's two-year actual and ten-year projected nuclear, coal, oil, and gas requirements (by fuel units) are shown on Schedule 5. PEF's two-year actual and ten-year projected energy sources, in GWh and percent, are shown by fuel type on Schedules 6.1 and 6.2, respectively. PEF's fuel requirements and energy sources reflect a diverse fuel supply system that is not dependent on any one-fuel source. In the near term, natural gas consumption is projected to increase as plants and purchases with tolling agreements are added to meet future load growth. The proportion of energy provided by natural gas will decrease with the addition of new coal resources toward the latter years of the ten-year planning horizon.

#### SCHEDULE 5 FUEL REQUIREMENTS

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
				-ACT	UAL-										
	EUE	L REQUIREMENTS	<u>UNITS</u>	<u>2004</u>	<u>2005</u>	<u>2006</u>	<u>2007</u>	<u>2008</u>	2009	<u>2010</u>	<u>2011</u>	<u>2012</u>	2013	2014	2015
(1)	NUCLEAR		TRILLION BTU	69	60	65	62	68	52	68	63	68	63	68	63
(2)	COAL		1,000 TON	5,915	6,249	5,877	6,083	5,872	6,045	6,690	6,766	6,648	7.882	9,588	10,374
(3)	RESIDUAL	TOTAL	1,000 BBL	10,864	10,324	7,658	8,219	8,055	5,379	2,935	2,951	3,101	2,677	2,605	2.443
(4)		STEAM	1,000 BBL	10,864	10,324	7,658	8.219	8,055	5,379	2,935	2,951	3,101	2,677	2,605	2,443
(5)		CC	1,000 BBL	0		0	0	0	0	0	0	0	0	0	0
(6)		CT	1,000 BBL	0		0	0	0	0	0	0	0	0	0	0
(7)		DIESEL	1,000 BBL	0		0	0	0	0	0	0	0	0	0	0
(8)	DISTILLATE	TOTAL	1,000 BBL	1.019	1,098	1,255	1,204	1,144	1,116	1,063	1,078	1,056	1,027	1,003	1,040
(9)		STEAM	1,000 BBL	152	97	50	43	47	41	48	50	56	59	57	65
(10)		сс	1,000 BBL	2	3	0	0	0	0	٥	0	0	0	0	D
(11)		CT	1,000 BBL	865	998	1,205	1,161	1,098	1,074	1,016	1,028	1,000	969	946	974
(12)		DIESEL	1,000 BBL	0	0	0	0	0	0	0	0	0	0	0	0
(13)	NATURAL GAS	TOTAL	1,000 MCF	62,674	68,447	86,145	91,824	103,618	132,457	145,075	170,627	177,247	170,540	152,332	151,001
(14)		STEAM	1,000 MCF	1,071	732	0	0	0	0	10,335	10,290	10,921	9,127	9,091	8,801
(15)		сс	1,000 MCF	45.816	52,5 <del>9</del> 0	67,698	73,841	85,931	114,696	118,175	143.499	149,403	145,137	127.210	126,012
(16)		СТ	1,000 MCF	15,787	15,125	18,447	17,983	17,687	17,760	16,566	16,838	16,923	16.276	16,031	16,187
	OTHER (SPECIFY)														

(17) OTHER, DISTILLATE ANNUAL FIRM INTERCHANGE	1,000 BBL	N/A	N/A	0	0	1	12	4	15	0	0	0	0
(18) OTHER, NATURAL CAANNUAL FIRM INTERCHANGE,	1,000 MCF	N/A	N/A	0	0	0	0	4,953	7,856	7,716	6,931	5,502	4,999
(18) OTHER, NATURAL GAANNUAL FIRM INTERCHANGE,	1,000 MCF	N/A	N/A	672	3,061	1,923	1,314	1,396	1,697	2,049	1,290	915	538

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#### SCHEDULE 6.1

#### ENERGY SOURCES (GWh)

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
				-AC	TUAL-										
	ENERGY SOURCES		UNITS	<u>2004</u>	<u>2005</u>	2006	<u>2007</u>	2008	2009	<u>2010</u>	<u>2011</u>	<u>2012</u>	<u>2013</u>	<u>2014</u>	<u>2015</u>
(1)	ANNUAL FIRM INTERCHANGE	1/	GWh	417	2,220	1,371	1,690	1,563	1,495	2,596	1,958	1,899	1,694	1.418	1,303
(2)	NUCLEAR		GWh	6,703	5,829	6,307	6,052	6,655	5,089	6.636	6,143	6,655	6,143	6,636	6,144
(3)	COAL		GWh	15,063	15,834	15,058	15,602	15,024	15,353	16,583	16,792	16,495	19,904	24,645	26,816
(4)	RESIDUAL	TOTAL	GWh	6,981	6,618	4,696	5,081	4,956	3,291	1.794	1.802	1,902	1,623	1,583	1,483
(5)		STEAM	GWh	6,981	6,618	4,696	5,081	4,956	3,291	1,794	1.802	1,902	1,623	1,583	1,483
(6)		сс	GWħ	0	0	0	0	0	0	0	0	0	0	0	0
(7)		СТ	GWh	0	0	0	0	0	0	0	0	0	0	0	0
(8)		DIESEL	GWh	0	0	0	0	0	0	0	0	0	0	0	0
(9)	DISTILLATE	TOTAL	GWh	361	414	430	415	390	385	362	368	356	345	336	345
(10)		STEAM	GWh	0	0	0	0	0	0	0	0	0	0	0	0
(11)		сс	GWh	2	0	0	0	0	0	0	0	0	0	0	0
(12)		СТ	GWh	359	414	430	415	390	385	362	368	356	345	336	345
(13)		DIESEL	GWh	0	0	0	0	0	0	0	0	0	0	0	0
(14)	NATURAL GAS	TOTAL	GWh	7,516	8,236	10.123	10,867	12,471	16.515	18,077	21,662	22,621	21,711	19,180	19,008
(15)		STEAM	GWh	106	74	0	0	0	0	1,023	1,019	1,085	898	895	861
(16)		сс	GWh	6,227	7.025	8,786	9,565	11,182	15,188	15,827	19,394	20,267	19,603	17,094	16,937
(17)		СТ	GWh	1,183	1,137	1,337	1,302	1,290	1,327	1,227	1,249	1,269	1.210	i,191	1,209
(18)	OTHER 2/														
	QF PURCHASES		GWh	4,685	4,211	4,650	4,528	4,496	4,485	4.492	4.494	4.506	4,284	3,151	3,112
	IMPORT FROM OUT OF STATE		GWh	3,862	3,599	3,532	3,525	3,521	3.535	1,466	0	0	0	0	0
	EXPORT TO OUT OF STATE		GWh	-320	-83	0	0	0	0	0	0	0	0	0	0
(19)	NET ENERGY FOR LOAD		GWh -	45,268	46,878	46,167	47,759	49,076	50,148	52,006	53,219	54,434	55,704	56,948	58,211

1/ NET ENERGY PURCHASED (+) OR SOLD (-) WITHIN THE FRCC REGION.

2/ NET ENERGY PURCHASED (+) OR SOLD (-).

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#### SCHEDULE 6.2

#### ENERGY SOURCES (PERCENT)

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
	-ACTUAL-														
	ENERGY SOURCES		<u>UNITS</u>	<u>2004</u>	<u>2005</u>	<u>2006</u>	<u>2007</u>	<u>2008</u>	<u>2009</u>	<u>2010</u>	<u>2011</u>	<u>2012</u>	<u>2013</u>	<u>2014</u>	2015
(1)	ANNUAL FIRM INTERCHANGE	1/	%	0.9%	4.7%	3.0%	3.5%	3.2%	3.0%	5.0%	3.7%	3.5%	3.0%	2.5%	2.2%
(2)	NUCLEAR		%	14.8%	12.4%	13.7%	12.7%	13.6%	10.1%	12.8%	11.5%	12.2%	11.0%	11.7%	10.6%
(3)	COAL		%	33.3%	33.8%	32.6%	32.7%	30.6%	30.6%	31.9%	31.6%	30.3%	35.7%	43.3%	46.1%
(4)	RESIDUAL	TOTAL	%	15.4%	14.1%		10.6%	10.1%	6.6%	3.5%	3.4%	3.5%	2.9%	2.8%	2.5%
(5)		STEAM	%	15.4%	14.1%	10.2%	10.6%	10.1%	6.6%	3.5%	3.4%	3.5%	2.9%	2.8%	2.5%
(6)		CC	%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
(7)		CT	%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
(8)		DIESEL	%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
(0)	DISTILLATE	TOTAL	%	0.8%	0.9%	0.9%	0.9%	0.8%	0.8%	0.7%	0.7%	0.7%	0.6%	0.6%	0.60/
(9)	DISTILLATE	STEAM	~~ %	0.0%	0.9%	0.9%	0.9%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%		0.6%
(10)		CC	70 %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
(11)		СС	%											0.0%	0.0%
(12)				0.8%	0.9%	0.9%	0.9%	0.8%	0.8%	0.7%	0.7%	0.7%	0.6%	0.6%	0.6%
(13)		DIESEL	%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
(14)	NATURAL GAS	TOTAL	%	16.6%	17.6%	21.9%	22.8%	25.4%	32.9%	34.8%	40.7%	41.6%	39.0%	33.7%	32.7%
(15)		STEAM	%	0.2%	0.2%	0.0%	0.0%	0.0%	0.0%	2.0%	1.9%	2.0%	1.6%	1.6%	1.5%
(16)		СС	%	13.8%	15.0%	19.0%	20.0%	22. <b>8</b> %	30.3%	30.4%	36.4%	37.2%	35.2%	30.0%	29.1%
(17)		CT	%	2.6%	2.4%	2.9%	2.7%	2.6%	2.6%	2.4%	2.3%	2.3%	2.2%	2.1%	2.1%
(18)	OTHER 2/														
	QF PURCHASES		%	10.3%	9.0%	10.1%	9.5%	9.2%	8.9%	8.6%	8.4%	8.3%	7.7%	5.5%	5.3%
	IMPORT FROM OUT OF STATE		%	8.5%	7. <b>7</b> %	7.7%	7.4%	7.2%	7.0%	2.8%	0.0%	0.0%	0.0%	0.0%	0.0%
	EXPORT TO OUT OF STATE		%	-0.7%	-0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
(19)	NET ENERGY FOR LOAD		% 1	.00.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

1/ NET ENERGY PURCHASED (+) OR SOLD (-) WITHIN THE FRCC REGION.

2/ NET ENERGY PURCHASED (+) OR SOLD (-).

# FORECASTING METHODS AND PROCEDURES INTRODUCTION

Accurate forecasts of long-range electric energy consumption, customer growth and peak demand are essential elements in electric utility planning. Accurate projections of a utility's future load growth require a forecasting methodology with the ability to account for a variety of factors influencing electric energy usage over the planning horizon. PEF's forecasting framework utilizes a set of econometric models to achieve this end. This chapter will describe the underlying methodology of the customer, energy, and peak demand forecasts including any assumptions incorporated within each. Also included is a description of how Demand-Side Management (DSM) impacts the forecast, the development of high and low forecast scenarios and a review of DSM programs.

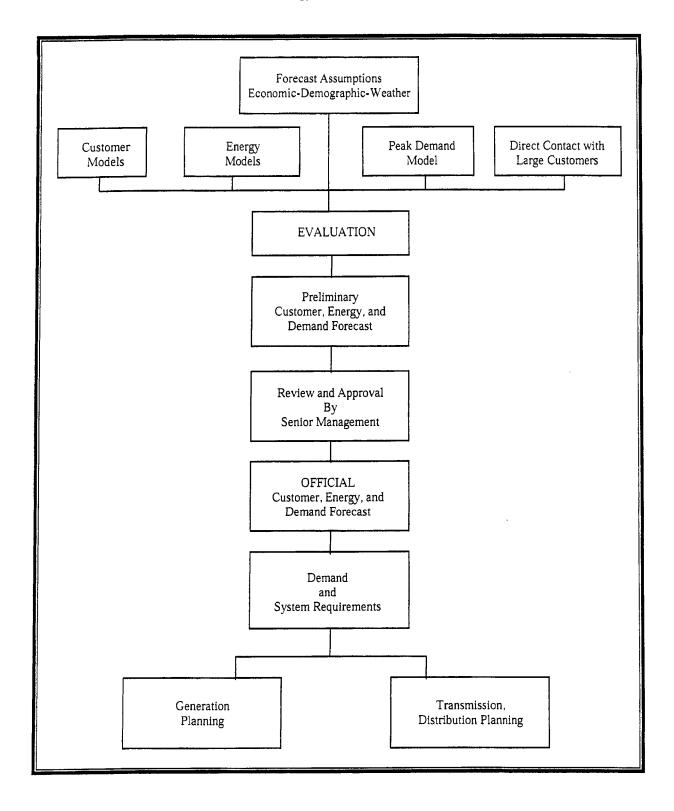
Figure 2.1, entitled "Customer, Energy and Demand Forecast", gives a general description of PEF's forecasting process. Highlighted in the diagram is a disaggregated modeling approach that blends the impacts of average class usage as well as customer growth based on a specific set of assumptions for each class. Also accounted for is some direct contact with large customers. These inputs provide the tools needed to frame the most likely scenario of the company's future demand.

#### FORECAST ASSUMPTIONS

The first step in any forecasting effort is the development of assumptions upon which the forecast is based. The Corporate Planning Department develops these assumptions based on discussions with a number of departments within PEF, as well as through the research efforts of a number of external sources. These assumptions specify major factors that influence the level of customers, energy sales, or peak demand over the forecast horizon. The following set of assumptions forms the basis for the forecast presented in this document.

# FIGURE 2.1

# Customer, Energy, and Demand Forecast



#### **GENERAL ASSUMPTIONS**

- Normal weather conditions are assumed over the forecast horizon using a sales-weighted average of conditions at the St. Petersburg, Orlando and Tallahassee weather stations. For kilowatt-hour sales projections, normal weather is based on a historical thirty-year average of service area weighted billing month degree-days. Seasonal peak demand projections are based on a thirty-year historical average of system-weighted temperatures at time of seasonal peak.
- 2. The population projections produced by the Bureau of Economic and Business Research (BEBR) at the University of Florida as published in "Florida Population Studies Bulletin No. 141 (February 2005) provide the basis for development of the customer forecast. State and national economic assumptions produced by Economy.Com in their national and Florida forecasts (February 2005) are also incorporated.
- 3. Within the PEF service area the phosphate mining industry is the dominant sector in the industrial sales class. Four major customers accounted for nearly 31% of the industrial class MWh sales in 2005. These energy intensive customers mine and process phosphate-based fertilizer products for the global marketplace. Both supply and demand conditions for their products are dictated by global conditions that include, but are not limited to, foreign competition, national/international agricultural industry conditions, exchange-rate fluctuations, and international trade pacts. Load and energy consumption at the PEF-served mining or chemical processing sites depend heavily on plant operations, which are heavily influenced by the state of these global conditions as well as local conditions. After years of excess mining capacity and weak product pricing power, the industry has consolidated down to fewer players in time to take advantage of better market conditions. A weaker U.S currency value on the foreign exchange is expected to help the industry in two ways. First, American farm commodities will be more competitive overseas and lead to higher crop production at home. This will result in greater demand for fertilizer products. Second, a weak U.S. dollar results in U.S. fertilizer producers becoming more price competitive relative to foreign producers. Going forward, energy consumption is expected to increase - as we have recently experienced - to the levels just below that experienced in the late 1990 boom period. A significant risk to this projection lies in the continued high price of natural gas, which is a major cost of production.

Operations at several sites in the U.S. have already scaled back or shutdown due to profitability concerns caused by high energy prices. The energy projection for this industry assumes no major reductions or shutdowns of operations in the service territory.

- 4. PEF supplies load and energy service to wholesale customers on a "full", "partial" and "supplemental" requirement basis. Full requirements (FR) customers' demand and energy is assumed to grow at a rate that approximates their historical trend. Contracts for this service include the cities of Bartow, Chattahoochee, Mt. Dora, Quincy, Williston and Winter Park. Partial requirements (PR) customer load is assumed to reflect the current contractual obligations received by PEF as of May 31, 2005. The forecast of energy and demand to PR customers reflects the nature of the stratified load they have contracted for, plus their ability to receive dispatched energy from power marketers any time it is more economical for them to do so. Contracts for PR service included in this forecast are with the Florida Municipal Power Agency (FMPA), New Smyrna Beach, Tallahassee, Homestead, Reedy Creek Utilities, TECO Energy (Market Mitigation Sale) and Seminole Electric Cooperative, Inc. (SECI). PEF's contractual arrangement with SECI includes a "supplemental" service contract (1983 contract) for service over and above stated levels they commit to supply themselves. The firm PR contract with SECI includes 150 MW of stratified intermediate service (October 1995 contract) which is projected to continue through the forecast horizon. The firm PR contract with SECI also includes amendments to provide an additional 150 MW of stratified intermediate service beginning June 2006, and another 150 MW beginning December 2006. Agreements to provide interruptible service at three individual SECI metering sites have also been included in this projection. Finally, a FR contract to serve SECI load will commence in 2010 and last through the forecast horizon.
- 5. This forecast assumes that PEF will successfully renew all future franchise agreements.
- 6. This forecast incorporates demand and energy reductions from PEF's dispatchable and nondispatchable DSM programs required to meet the approved goals set by the FPSC.

- 7. Expected energy and demand reductions from self-service cogeneration are also included in this forecast. PEF will supply the supplemental load of self-service cogeneration customers. While PEF offers "standby" service to all cogeneration customers, the forecast does not assume an unplanned need for standby power.
- 8. This forecast assumes that the regulatory environment and the obligation to serve our retail customers will continue throughout the forecast horizon. Regarding wholesale customers, the company does not plan for generation resources unless a long-term contract is in place. Current FR customers are assumed to renew their contracts with PEF except those who have given notice to terminate. Current PR contracts are projected to terminate as terms reach their expiration date. Deviation from these assumptions can occur based on information provided by the Regulated Commercial Operations Department.

# SHORT-TERM ECONOMIC ASSUMPTIONS

The economic outlook for this forecast was developed in 2005 as energy prices were hitting record highs around the world. The general consensus was that the U.S. economy, which was growing at a reasonable rate, would not slip into recession due to the higher cost of energy. A described "soft patch" in economic activity apparent at the time of this forecast development as high gasoline prices had been reducing consumer confidence levels. Short term interest rates, controlled mostly by Federal Reserve Board (FED) policy decisions, have increased significantly in the last 12 months as hints of inflation have filtered through the reported price indexes. The days of 45-plus year lows in interest rates have ended. The FED had moved to increase rates ten times at this point – no longer seeing the need to stimulate the national economy from the post September 11<sup>th</sup> weakness that occurred. The national economy had bounced back significantly (except for job growth statistics). Economists were not in complete agreement about where monetary policy would go from here. Most thought that the FED was much closer to ending its "tightening" policy of gradually raising interest rates than those who believed that inflationary fears would require many more rate increases.

Consensus opinion believes that the economic stimulus supplied by the three federal tax cuts and the refinancing boom have pretty much run their course. Additional stimulus from these two phenomena is not expected going forward. One item believed to become a positive factor for future economic

momentum is the weaker U.S. currency. Up to this point it had not supplied the punch assumed in the last forecast. This is due to several major U.S. trading partners, mainly China, having their currencies pegged to the U.S. Dollar. The Mexican Peso has actually weakened against the Dollar. This has kept the typical advantages of a weaker currency from helping U.S. manufacturers. Also, European economies have not been robust enough to fuel added imports of U.S. products. Going forward, it is expected that economic and political pressures will force the Chinese to de-link their currency and allow it to appreciate in value. This likely will make American-produced products more competitive with imported Chinese goods around the globe.

The housing sector has continued on an unprecedented pace. Most signs, however, point to an industry that likely will not maintain this level of growth. Long term interest rates (and mortgage rates) have not increased at the same pace as short term rates allowing the momentum to continue. At some point the demand for housing pushed by new household formations will, in all likelihood, weaken. The demand for second homes could fall as interest rates finally rise.

The Florida economy has faired much better than the nation, especially in terms of job growth. The tourism industry, which has bounced back from the terrorism fears of 2001, will now have to juggle the impact of high oil prices on the travel industry.

Growth in energy consumption is directly tied to the levels of economic activity in the State, nation and around the world, but demographic forces play a major role as well. Factors that influence inmigration rates to Florida impact residential customer growth, especially since the difference between births and deaths contribute little to Florida's growing population. Many factors influence the pace of in-migration to Florida but there is one broad, demographically created influence one can expect during the next few years. The University of Florida's latest population projection (February 2005) shows a return to more normal levels of growth in Florida population as we move into the mid-decade. This is due to economy-related conditions as well as demographic conditions that measure population by age brackets. There will be a significant jump in the retirement-age population later this decade.

#### LONG-TERM ECONOMIC ASSUMPTIONS

The long-term economic outlook assumes that changes in economic and demographic conditions will follow a trended behavior pattern. The main focus involves identifying these trends. No attempt is made to predict business cycle fluctuations during this period.

#### **Population Growth Trends**

This forecast assumes Florida will experience slower in-migration and population growth over parts of the long term, as reflected in the BEBR projections. Florida's climate and low cost of living have historically attracted a major share of the retirement population from the eastern half of the United States. This will continue to occur, but at less than historic rates for several reasons. First, Americans entering retirement age during the late 1990s and early twenty-first century were born during the Great Depression era of the 1930s. This decade experienced a low birth rate due to the economic conditions at that time. Now that this generation is retiring, there exists a smaller pool of retirees capable of migrating to Florida. As we enter into the second decade of the new century and the baby-boom generation enters retirement age, the reverse effect can be expected.

Second, the enormous growth in population and corresponding development of the 1980s, 1990s and early 2000s made portions of Florida less desirable and less affordable for retirement living. This diminished the quality of retiree life, and along with increasing competition from neighboring states, is expected to cause a slight decline in Florida's share of these prospective new residents over the long term.

Another reason for a population growth slowdown appears to be the fear and expense of Hurricanes. The summers of 2004 and 2005 may force some in-migrants to rethink their retirement location as the inconvenience caused by recent destruction and ever-increasing cost of hazard insurance makes Florida a less desirable place to live.

#### Economic Growth Trends

Florida has been recently experiencing a 1980s-style population explosion and service sector job creation. The State has benefited greatly from generational lows in interest rates, which along

with investors' unfriendly attitude toward the equity markets, set the stage for a tremendous explosion in home construction. The national level of homebuilding in 2005, which rose to more than 31% higher than in 2000, set an all time record. This growth produced strong gains in both the construction industry and service-producing sectors of the Florida economy.

While most agree that this pace of growth is not sustainable, the economic environment that produced this construction boom has begun to wane. Interest rates are returning to more "long term" norms. Investment in equity markets appears to have bounced back of late. More importantly, affordability rates have dropped as housing prices in many parts of Florida have out-paced many areas of the country. This could have a major impact on retiree decisions to move into the area. Making matters worse is the availability and affordability of homeowners insurance, which has become a concern of increasing importance since the Hurricane seasons of 2004 and 2005.

Florida's rapid population growth of late has created a period of strong job creation, especially in the service sector industries. While the service-oriented economy expanded to support an increasing population level, there were also a number of corporations migrating to Florida capitalizing on the low cost, low tax business environment. This being the case, increased job opportunities in Florida created greater in-migration among the nation's working age population. Florida's ability to attract businesses from other states because of its "comparative advantage" is expected to continue throughout the forecast period but at a less significant level. Florida's successful effort to attract a large biotech firm, Scripps Research, has the potential to draw a whole new growth industry to the State, the same way Disney and NASA once did.

The forecast assumes negative growth in real electricity price. That is, the change in the nominal price of electricity over time is expected to be less than the overall rate of inflation. This also implies that fuel price escalation will track at or below the general rate of inflation throughout the forecast horizon.

Real personal incomes are assumed to increase throughout the forecast period thereby boosting the average customer's ability to purchase electricity -- especially since the price of electricity is

expected to increase at a rate below general inflation. As incomes grow faster than the price of electricity, consumers, on average, will remain inclined to purchase additional electric appliances and increase their utilization of existing end-uses.

#### FORECAST METHODOLOGY

The PEF forecast of customers, energy sales and peak demand is developed using customer class-specific econometric models. These models are expressly designed to capture class-specific variation over time. By modeling customer growth and average energy usage individually, subtle changes in existing customer usage are better captured as well as growth from new customers. Peak demand models are projected on a disaggregated basis as well. This allows for appropriate handling of individual assumptions in the areas of wholesale contracts, load management and interruptible service.

#### **ENERGY AND CUSTOMER FORECAST**

In the retail jurisdiction, customer class models have been specified showing a historical relationship to weather and economic/demographic indicators using monthly data for sales models and annual data for customer models. Sales are regressed against "driver" variables that best explain monthly fluctuations over the historical sample period. Forecasts of these input variables are either derived internally or come from a review of the latest projections made by several independent forecasting concerns. The external sources of data include Moody's Economy.Com and the University of Florida's Bureau of Economic and Business Research. Internal company forecasts are used for projections of electricity price, weather conditions and the length of the billing month. Normal weather, which is assumed throughout the forecast horizon, is based on the 30-year average of heating and cooling degree-days by month as measured at the St Petersburg, Orlando and Tallahassee weather stations. Projections to the forecast. Specific sectors are modeled as follows:

#### **Residential Sector**

Residential kWh usage per customer is modeled as a function of real Florida personal income, cooling degree-days, heating degree-days, the real price of electricity to the residential class and the

average number of billing days in each sales month. This equation captures significant variation in residential usage caused by economic cycles, weather fluctuations, electric price movements and sales month duration. Projections of kWh usage per customer combined with the customer forecast provide the forecast of total residential energy sales. The residential customer forecast is developed by correlating annual customer growth with PEF service area population growth and mortgage rates. County level population projections for the 29 counties, in which PEF serves residential customers, are provided by the BEBR.

#### **Commercial Sector**

Commercial kWh use per customer is forecast based on commercial (non-agricultural, nonmanufacturing and non-governmental) employment, the real price of electricity to the commercial class, the average number of billing days in each sales month and heating and cooling degree-days. The measure of cooling degree-days utilized here differs slightly from that used in the residential sector reflecting the unique behavior pattern of this class with respect to its cooling needs. Commercial customers are projected as a function of the number of residential customers served.

#### Industrial Sector

Energy sales to this sector are separated into two sub-sectors. A significant portion of industrial energy use is consumed by the phosphate mining industry. Because this one industry comprises nearly a 30% share of the total industrial class, it is separated and modeled apart from the rest of the class. The term "non-phosphate industrial" is used to refer to those customers who comprise the remaining portion of total industrial class sales. Both groups are impacted significantly by changes in economic activity. However, adequately explaining sales levels requires separate explanatory variables. Non-phosphate industrial energy sales are modeled using Florida manufacturing employment and a Florida industrial production index developed by Economy.Com, the real price of electricity to the industrial class, and the average number of sales month billing days.

The industrial phosphate mining industry is modeled using customer-specific information with respect to expected market conditions. Since this sub-sector is comprised of only four customers, the forecast is dependent upon information received from direct customer contact. PEF industrial customer representatives provide specific phosphate customer information regarding customer

production schedules, inventory levels, area mine-out and start-up predictions, and changes in selfgeneration or energy supply situations over the forecast horizon.

### Street Lighting

Electricity sales to the street and highway lighting class are projected to increase due to growth in the service area population base. Because this class comprised less than 0.01% of PEF's 2005 electric sales and just 0.1% of total customers, a simple time trend was used to project energy consumption and customer growth in this class.

#### **Public** Authorities

Energy sales to public authorities (SPA), comprised mostly of government operated services, is also projected to grow with the size of the service area. The level of government services, and thus energy use per customer, can be tied to the population base, as well as to the state of the economy. Factors affecting population growth will affect the need for additional governmental services (i.e., schools, city services, etc.) thereby increasing SPA energy usage per customer. Government employment has been determined to be the best indicator of the level of government services provided. This variable, along with heating and cooling degree-days, the real price of electricity and the average number of sales month billing days, results in a significant level of explained variation over the historical sample period. Intercept shift variables are also included in this model to account for the large change in school-related energy use in the billing months of January, July and August. SPA customers are projected linearly as a function of a time-trend.

#### Sales for Resale Sector

The Sales for Resale sector encompasses all firm sales to other electric power entities. This includes sales to other utilities (municipal or investor-owned) as well as power agencies (Rural Electric Authority or Municipal).

SECI is a wholesale, or sales for resale, customer of PEF on both a supplemental contract basis and contract demand basis. Under the supplemental contract, PEF provides service for those energy requirements above the level of generation capacity served by either SECI's own facilities or its firm purchase obligations. Monthly supplemental energy is developed using an average of several years' historical load shape of total load in the PEF control area, subtracting out the level of SECI "committed" capacity from each hour. Beyond supplemental service, PEF has an agreement with SECI to serve stratified intermediate and peaking energy. This agreement involves serving 150 MW of stratified intermediate demand that is assumed to remain a requirement on the PEF system throughout the forecast horizon. This contract has been amended to provide an additional 300 MW stratified intermediate product beginning in 2006. Energy usage under this contract is projected using typical intermediate strata load factors. Agreements to provide non-firm or interruptible service are currently in effect between PEF and SECI at three separate metering points amounting to an estimated 50 MW. Another contract, signed in 2004 to supply full requirements service for 150 MW, will begin in 2010.

The municipal sales for resale class includes a number of customers, divergent not only in scope of service, (i.e., full or partial requirement), but also in composition of ultimate consumers. Each customer is modeled separately in order to accurately reflect its individual profile. Several of the customers in this class are municipalities whose full energy requirements are met by PEF. The full requirement customers are modeled individually using local weather station data and population growth trends. Since the ultimate consumers of electricity in this sector are, to a large degree. residential and commercial customers, it is assumed that their use patterns will follow those of the PEF retail-based residential and commercial customer classes. PEF serves partial requirement service (PR) to municipalities such as New Smyrna Beach (NSB), Homestead and Tallahassee, and other power providers like FMPA. In each case, these customers contract with PEF for a specific level and type of demand needed to provide their particular electrical system with an appropriate level of reliability. The terms of the FMPA and NSB contracts are subject to change each year via a letter of "declared" MW nomination. More specifically, this means that the level and type of demand and energy under contract can increase or decrease for each year a value is nominated. The energy forecast for each contract is derived using its historical load factors where enough history exists, or typical load factors for a given type of contracted stratified load. The energy projections for FMPA also include a "losses service contract" for energy PEF supplies to FMPA for transmission losses incurred when "wheeling" power to their ultimate customers in PEF's transmission area. This projection is based on the projected requirements of the aggregated needs of the cities of Ocala, Leesburg, Bushnell, Havana and Newberry.

### PEAK DEMAND FORECAST

The forecast of peak demand also employs a disaggregated econometric methodology. For seasonal (winter and summer) peak demands, as well as each month of the year, PEF's coincident system peak is dissected into five major components. These components consist of potential firm retail load, conservation and load management program capability, wholesale demand, company use demand and interruptible demand.

Potential firm retail load refers to projections of PEF retail hourly seasonal net peak demand (excluding the non-firm interruptible/curtailable/standby services) before the cumulative effects of any conservation activity or the activation of PEF's Load Management program. The historical values of this series are constructed to show the size of PEF's firm retail net peak demand assuming no utility-induced conservation or load control had taken place. The value of constructing such a "clean" series enables the forecaster to observe and correlate the underlying trend in retail peak demand to total system customer levels and coincident weather conditions at the time of the peak without the impacts of year-to-year variation in conservation activity or load control reductions. Seasonal peaks are projected using historical seasonal peak data regardless of which month the peak occurred. The projections become the potential retail demand projection for the month of January (winter) and August (summer) since this is typically when the seasonal peaks occur. The nonseasonal peak months are projected the same as the seasonal peaks, but the analysis is limited to the specific month being projected. Since the historical data used in modeling this series includes service to the City of Winter Park, which municipalized its distribution system, the final forecast of this series is reduced by the projection of MW demand required to serve Winter Park as a wholesale customer.

Energy conservation and direct load control estimates are consistent with PEF's DSM goals that have been approved by the FPSC. These estimates are incorporated into the MW forecast. Projections of dispatchable and cumulative non-dispatchable DSM are subtracted from the projection of potential firm retail demand resulting in a projected series of retail demand figures one would expect to occur.

Sales for Resale demand projections represent load supplied by PEF to other electric utilities such as SECI, FMPA, and other electric distribution companies. The SECI supplemental demand projection is based on a trend of their historical demand within the PEF control area. The level of MW to be served by PEF is dependent upon the amount of generation resources SECI supplies itself or contracts from others. An assumption has been made that beyond the last year of committed capacity declaration (five years out), SECI will shift their level of self-serve resources to meet their base and intermediate load needs. For FMPA and NSB demand projections, historical ratios of coincident-to-contract levels of demand are applied to future MW contract levels. Demand requirements continue at the MW level indicated by the final year in their respective contract declaration letter. The full requirements municipal demand forecast is estimated for individual cities using linear econometric equations modeling both weather and economic impacts specific to each locale. The seasonal (winter and summer) projections become the January and August peak values, respectively. The non-seasonal peak months are calculated using monthly allocation factors derived from applying the historical relationship between each winter month (November to March) relative to the winter peak, and each summer month (April to October) in relation to the summer peak demand.

PEF "company use" at the time of system peak is estimated using load research metering studies and is assumed to remain stable over the forecast horizon. The interruptible and curtailable service (IS and CS) load component is developed from historic trends, as well as the incorporation of specific information obtained from PEF's large industrial accounts by field representatives.

Each of the peak demand components described above is a positive value except for the DSM program MW impacts and IS and CS load. These impacts represent a reduction in peak demand and are assigned a negative value. Total system peak demand is then calculated as the arithmetic sum of the five components.

### HIGH AND LOW FORECAST SCENARIOS

The high and low bandwidth scenarios around the base MWh energy sales forecast are developed using a Monte Carlo simulation applied to a multivariate regression model that closely replicates the base retail MWh energy forecast in aggregate. This model accounts for variation in Gross Domestic Product, retail customers and electricity price. The base forecasts for these variables were developed based on input from Economy.Com and internal company price projections. Variation around the base forecast predictor variables used in the Monte Carlo simulation was based on an 80 percent confidence interval calculated around variation in each variable's historic growth rate. While the total number of degree-days (weather) was also incorporated into the model specification, the high and low scenarios do not attempt to capture extreme weather conditions. Normal weather conditions were assumed in all three scenarios.

The Monte Carlo simulation was produced through the estimation of 1,000 scenarios for each year of the forecast horizon. These simulations allowed for random normal variation in the growth trajectories of the economic input variables (while accounting for cross-correlation amongst these variables), as well as simultaneous variation in the equation (model error) and coefficient estimates. These scenarios were then sorted and rank ordered from one to a thousand, while the simulated scenario with no variation was adjusted to equal the base forecast.

The low retail scenario was chosen from among the ranked scenarios resulting in a bandwidth forecast reflecting an approximate probability of occurrence of 0.10. The high retail scenario similarly represents a bandwidth forecast with an approximate probability of occurrence of 0.90. In both scenarios the high and low peak demand bandwidth forecasts are projected from the energy forecasts using the load factor implicit in the base forecast scenario.

#### **CONSERVATION**

PEF's DSM performance is shown in the following tables, which compare the conservation savings actually achieved through PEF's DSM programs for the reporting year of 2005 with the Commission-approved conservations goals.

On August 9, 2004, the FPSC issued a PAA Order approving new conservation goals for PEF that span the ten-year period from 2005 through 2014 (in Docket 040031-EG, Order No. PSC-04-0769-PAA-EG). In that same PAA Order, the Commission also approved a new DSM Plan for PEF that was specifically designed to meet the new conservation goals. The PAA Order was

subsequently made effective and final in a Consummating Order (PSC-04-0852-CO-EG) issued by the Commission on September 1, 2004.

	Sur	nmer MW	W	inter MW	Annual GWh Energy			
Year	Goal	Achieved	Goal	Achieved	Goal	Achieved		
2005	13	18	43	48	21	29		

**Residential Conservation Savings Goals and Achievements** 

Commercial Conservation Savings Goals and Achievements

	Sur	nmer MW	W	inter MW	Annual GWh Energy			
Year	Goal	Achieved	Goal	Achieved	Goal	Achieved		
2005	4	8	3	6	3	3		

The forecasts contained in this Ten-Year Site Plan document are based on PEF's new DSM Plan and, therefore, appropriately reflect the level of DSM savings required to meet the Commissionestablished conservation goals. PEF's DSM Plan consists of five residential programs, seven commercial and industrial programs, and one research and development program. The programs are subject to periodic monitoring and evaluation for the purpose of ensuring that all DSM resources are acquired in a cost-effective manner and that the program savings are durable. Following is a brief description of these programs.

### **RESIDENTIAL PROGRAMS**

### Home Energy Check Program

This energy audit program provides customers with an analysis of their current energy use and recommendations on how they can save on their electricity bills through low-cost or no-cost energy-saving practices and measures. The Home Energy Check program offers PEF customers the following types of audits: Type 1: Free Walk-Through Audit (Home Energy Check); Type 2: Customer-completed Mail In Audit (Do It Yourself Home Energy Check); Type 3: Online Home Energy Check (Internet Option)-a customer-completed audit; Type 4: Phone Assisted Audit –A customer assisted survey of structure and appliance use; Type 5: Computer Assisted Audit; Type

6: Home Energy Rating Audit (Class I, II, III). The Home Energy Check Program serves as the foundation of the Home Energy Improvement Program in that the audit is a prerequisite for participation in the energy saving measures offered in the Home Energy Improvement Program.

#### Home Energy Improvement Program

This is the umbrella program to increase energy efficiency for existing residential homes. It combines efficiency improvements to the thermal envelope with upgraded electric appliances. The program provides incentives for attic insulation upgrades, duct testing and repair, and high efficiency electric heat pumps.

#### **Residential New Construction Program**

This program promotes energy efficient new home construction in order to provide customers with more efficient dwellings combined with improved environmental comfort. The program provides education and information to the design and building community on energy efficient equipment and construction. It also facilitates the design and construction of energy efficient homes by working directly with the builders to comply with program requirements. The program provides incentives to the builder for high efficiency electric heat pumps and high performance windows. The highest level of the program incorporates the Environmental Protection Agency's Energy Star Homes Program and qualifies participants for cooperative advertising.

### Low Income Weatherization Assistance Program

This umbrella program seeks to improve energy efficiency for low-income customers in existing residential dwellings. It combines efficiency improvements to the thermal envelope with upgraded electric appliances. The program provides incentives for attic insulation upgrades, duct testing and repair, reduced air infiltration, water heater wrap, HVAC maintenance, high efficiency heat pumps, heat recovery units, and dedicated heat pump water heaters.

#### Residential Energy Management Program

This is a voluntary customer program that allows PEF to reduce peak demand and thus defer generation construction. Peak demand is reduced by interrupting service to selected electrical equipment with radio controlled switches installed on the customer's premises. These interruptions are at PEF's option, during specified time periods, and coincident with hours of peak demand. Participating customers receive a monthly credit on their electricity bills prorated above 600 kWh/month.

### COMMERCIAL/INDUSTRIAL (C/I) PROGRAMS

#### **Business Energy Check Program**

This energy audit program provides commercial and industrial customers with an assessment of the current energy usage at their facilities, recommendations on how they can improve the environmental conditions of their facilities while saving on their electricity bills, and information on low-cost energy efficiency measures. The Business Energy Check consists of the following types of audits: A free walk-through audit, and a paid walk-through audit. Small business customers also have the option to complete a Business Energy Check online at Progress Energy's website. In most cases, this program is a prerequisite for participation in the other C/I programs.

#### **Better Business Program**

This is the umbrella efficiency program for existing commercial and industrial customers. The program provides customers with information, education, and advice on energy-related issues and incentives on efficiency measures that are cost-effective to PEF and its customers. The Better Business Program promotes energy efficient heating, ventilation, air conditioning (HVAC), and some building retrofit measures (in particular, ceiling insulation upgrade, duct leakage test and repair, energy-recovery ventilation and Energy Star cool roof coating products.)

#### Commercial/Industrial New Construction Program

The primary goal of this program is to foster the design and construction of energy efficient buildings. The new construction program: 1) provides education and information to the design community on all aspects of energy efficient building design; 2) requires that the building design, at a minimum, surpass the state energy code; 3) provides financial incentives for specific energy efficient equipment; and 4) provides energy design awards to building design teams. Incentives will be provided for high efficiency HVAC equipment, energy recovery ventilation and Energy Star cool roof coating products.

#### Innovation Incentive Program

This program promotes a reduction in demand and energy by subsidizing energy conservation projects for customers in PEF's service territory. The intent of the program is to encourage legitimate energy efficiency measures that reduce kW demand and/or kWh energy, but are not addressed by other programs. Energy efficiency opportunities are identified by PEF representatives during a Business Energy Check audit. If a candidate project meets program specifications, it will be eligible for an incentive payment, subject to PEF approval.

### Commercial Energy Management Program (Rate Schedule GSLM-1)

This direct load control program reduces PEF's demand during peak or emergency conditions. As described in PEF's DSM Plan, this program is currently closed to new participants. It is applicable to existing program participants who have electric space cooling equipment suitable for interruptible operation and are eligible for service under the Rate Schedule GS-1, GST-1, GSD-1, or GSDT-1. The program is also applicable to existing participants who have any of the following electrical equipment installed on permanent residential structures and utilized for domestic (household) purposes: 1) water heater(s), 2) central electric heating systems(s), 3) central electric cooling system(s), and/or 4) swimming pool pump(s). Customers receive a monthly credit on their bills depending on the type of equipment in the program and the interruption schedule.

#### Standby Generation Program

This demand control program reduces PEF's demand based upon the indirect control of customer generation equipment. This is a voluntary program available to all commercial, industrial, and agricultural customers who have on-site generation capability and are willing to reduce their PEF demand when PEF deems it necessary. The customers participating in the Standby Generation program receive a monthly credit on their electricity bills according to the demonstrated ability of the customer to reduce demand at PEF's request.

#### Interruptible Service Program

This direct load control program reduces PEF's demand at times of capacity shortage during peak or emergency conditions. The program is available to qualified non-residential customers

with an average billing demand of 500 kW or more, who are willing to have their power interrupted. PEF will have remote control of the circuit breaker or disconnect switch supplying the customer's equipment. In return for this ability to interrupt load, customers participating in the Interruptible Service program receive a monthly interruptible demand credit applied to their electric bills.

#### Curtailable Service

This direct load control program reduces PEF's demand at times of peak or emergency conditions. The program is available to qualified non-residential customers with an average billing demand of 500 kW or more, who are willing to curtail 25 percent of their average monthly billing demand. Customers participating in the Curtailable Service program receive a monthly curtailable demand credit applied to their electric bills.

#### **RESEARCH AND DEVELOPMENT PROGRAMS**

#### Technology Development Program

The primary purpose of this program is to establish a system to "Aggressively pursue research, development and demonstration projects jointly with others as well as individual projects" (Rule 25-17.001, {5}(f), Florida Administration Code). PEF will undertake certain development, educational and demonstration projects that have promise to become cost-effective demand reduction and energy efficiency programs. In most cases, each demand reduction and energy efficiency programs. In most cases, each demand reduction and energy efficiency programs. In most cases, each demand reduction and energy efficiency programs.

CHAPTER 3

FORECAST OF FACILITIES REQUIREMENTS



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# <u>CHAPTER 3</u> FORECAST OF FACILITIES REQUIREMENTS

# RESOURCE PLANNING FORECAST OVERVIEW OF CURRENT FORECAST

#### Supply-Side Resources

PEF has a summer total capacity resource of 10,413 MW, as shown in Table 3.1. This capacity resource includes nuclear (769 MW), fossil steam (3,882 MW), combined cycle plants (1,706 MW), combustion turbine (2,619 MW, 143 MW of which is owned by Georgia Power for the months June through September), utility purchased power (617 MW), and non-utility purchased power (820 MW). Table 3.2 shows PEF's contracts for firm capacity provided by Qualifying Facilities (QF's).

#### Demand-Side Programs

Total DSM resources are shown in Schedules 3.1.1 and 3.2.1 of Chapter 2. These programs include Non-Dispatchable DSM, Interruptible Load, and Dispatchable Load Control resources. PEF's 2006 Ten-Year Site Plan Demand-Side Management projections are consistent with the DSM Goals established by the Commission in Docket No. 040031-EG.

#### **Capacity and Demand Forecast**

PEF's forecasts of capacity and demand for the projected summer and winter peaks are shown in Schedules 7.1 and 7.2, respectively. PEF's forecasts of capacity and demand are based on serving expected growth in retail requirements in its regulated service area and meeting commitments to wholesale power customers who have entered into supply contracts with PEF. In its planning process, PEF balances its supply plan for the needs of retail and wholesale customers and endeavors to ensure that cost-effective resources are available to meet the needs across the customer base. Over the years, as wholesale markets have grown more competitive, PEF has remained active in the competitive solicitations while planning in a manner that maintains an appropriate balance of commitments and resources within the overall regulated supply framework.

### **Base Expansion Plan**

PEF's planned supply resource additions and changes are shown in Schedule 8 and are referred to as PEF's Base Expansion Plan. This Plan includes 3,910 net MW (summer rating) of proposed new capacity additions through the summer of 2015. As identified in Schedule 8, PEF's next planned need is the Hines 4 Unit, a 461 MW (summer) power block with a December 2007 in-service date. PEF's self-build option for Hines Unit 4 was determined to be the most cost-effective alternative, followed by the Bartow Repowering Project to be completed by June 2009.

PEF's Base Expansion Plan projects requirements for additional units with proposed in-service dates of 2007 through 2015. These units, together with the Central Power & Lime Purchase (December 2005 through December 2010), the TEA purchase (from June through September 2006, December 2006 through February 2007, and June through September 2007), the Shady Hills Purchase (April 2007 through April 2014), and the Southern Company Purchase (June 2010 through December 2015), help the PEF system meet the growing energy requirements of its customer base. Some of the identified unit additions may be impacted by PEF's ability to extend or replace existing purchase power contracts, as well as contracts with cogenerators and QF's. Status reports and specifications for new generation facilities are included in Schedule 9. Shown in Schedule 10 are the new transmission lines associated with Hines #4 and the Bartow Repowering Project.

Current planning studies identify gas-fired units as the most economic alternatives for system expansion in the near term. The forecast of natural gas prices has risen to the point where new pulverized coal units appear to be a cost effective alternative. Uncertainties over future fuel price relationships, environmental regulations, and the ability to site new coal units in Florida will require ongoing re-evaluations of the coal option. New nuclear technologies appear to offer favorable long-term economics, and provide favorable environmental characteristics, measured against possible emission limits imposed by the recently issued Clean Air Interstate Rule (CAIR). PEF is currently evaluating the nuclear option with the intent to pursue preliminary licensing activities should suitable sites for new nuclear units be available. Currently, the expected lead time to site, license, engineer, and construct a new nuclear unit place its in-service date outside the ten-year planning horizon presented in this document.

# TABLE 3.1

# PROGRESS ENERGY FLORIDA

# TOTAL CAPACITY RESOURCES OF POWER PLANTS AND PURCHASED POWER CONTRACTS

# AS OF DECEMBER 31, 2005

PLANTS	NUMBER OF UNITS	SUMMER NET DEPENDABLE CAPABILITY (MW)
Nuclear Steam		
Crystal River	$\frac{1}{1}$	<u>769</u> (1)
Total Nuclear Steam	1	769
Fossil Steam		
Crystal River	4	2,302
Anclote	2	993
Bartow	3	444
Suwannee River	<u>3</u>	<u>143</u>
Total Fossil Steam	12	3,882
Combined Cycle		
Hines Energy Complex	3	1,499
Tiger Bay	<u>1</u>	<u>207</u>
Total Combined cycle	4	1,706
Combustion Turbine		
DeBary	10	667
Intercession City	14	1,041 (2)
Bayboro	4	184
Bartow	4	187
Suwannee	3	164
Turner	. 4	154
Higgins	4	122
Avon Park	2	52
University of Florida	1	35
Rio Pinar	1	<u>13</u>
Total Combustion Turbine	47	2,619
Total Units	64	
Total Net Generating Capability		8,976
<ol> <li>Adjusted for sale of approximately 8.2%</li> <li>Includes 143 MW owned by Georgia Pc</li> </ol>	6 of total capacity ower Company (Jun-Sep)	
Purchased Power		
Qualifying Facility Contracts	19	820
Investor Owned Utilities	2	617
FOTAL CAPACITY RESOURCES		10,413

# TABLE 3,2

# PROGRESS ENERGY FLORIDA

# QUALIFYING FACILITY GENERATION CONTRACTS

# AS OF DECEMBER 31, 2005

Facility Name	Firm Capacity (MW)
Bay County Resource Recovery	11.0
Cargill	15.0
Dade County Resource Recovery	43.0
El Dorado	114.2
Jefferson Power	2.0
Lake Cogen	110.0
Lake County Resource Recovery	12.8
LFC Jefferson	8.5
LFC Madison	8.5
Mulberry	79.2
Orange Cogen (CFR-Biogen)	74.0
Orlando Cogen	79.2
Pasco Cogen	109.0
Pasco County Resource Recovery	23.0
Pinellas County Resource Recovery 1	40.0
Pinellas County Resource Recovery 2	14.8
Ridge Generating Station	39.6
Royster	30.8
US Agrichem	5.6
TOTAL	820.2

#### SCHEDULE 7.1 FORECAST OF CAPACITY, DEMAND AND SCHEDULED MAINTENANCE AT TIME OF SUMMER PEAK

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
	TOTAL	FIRM	FIRM		TOTAL	SYSTEM FIRM					
	INSTALLED	CAPACITY	CAPACITY		CAPACITY	SUMMER PEAK	RESERV	VE MARGIN	SCHEDULED	RESER	VE MARGIN
	CAPACITY	IMPORT	EXPORT	QF	AVAILABLE	DEMAND	BEFORE N	MAINTENANCE	MAINTENANCE	AFTER M	AINTENANCE
YEAR	MW	MW	MW	MW	MW	MW	MW	% OF PEAK	MW	MW	% OF PEAK
2006	8,843	817	• 0	813	10.473	8.771	1,702	19%	0	1,702	19%
2007	8,843	1,253 .	• 0	802	10,898	9.084	1.814	20%	0	1.814	20%
2008	9,304	1,095	0	798	11.197	9,351	1,846	20%	0	1.846	20%
2009	9,997	1,095	0	798	11,890	9,554	2,336	24%	0	2,336	24%
2010	10,136	1,093	0	798	12,027	9,931	2,096	21%	0	2,096	21%
2011	10,614	890	0	798	12.302	10,155	2,147	21%	0	2.147	21%
2012	10.775	890	0	798	12,463	10,383	2,080	20%	0	2.080	20%
2013	11,525	890	D	687	13,102	10.593	2,509	24%	0	2,509	24%
2014	12.275	412	0	500	13 187	10.813	2,374	22%	0	2,374	22%
2015	12.753	412	0	500	13,665	11.036	2,629	24%	0	2,629	24%

\* Progress Energy is pursuing seasonal purchases of approximately 200 MW in 2006 and 158 MW in 2007. The deals are not yet consummated as of the time of the Ten-Year Site Plan filling. Since the purchase is expected to be from peaking capacity, no energy impact has been included in the plan at this time.

The recently issued Clean Air Interstate Rule (CAIR) may impact PEF's need for new capacity. While a compliance plan has not yet been finalized, some alternatives may impact the capacity of existing and/or future generation resources, resulting in a need for additional capacity. Once the compliance plan has been finalized, PEF will quantify the impacts on generating resources and determine if any additional capacity is needed.

#### SCHEDULE 7.2 FORECAST OF CAPACITY, DEMAND AND SCHEDULED MAINTENANCE AT TIME OF WINTER PEAK

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
	TOTAL	FIRM	FIRM		TOTAL	SYSTEM FIRM					
	INSTALLED	CAPACITY	CAPACITY		CAPACITY	WINTER PEAK	RESERV	/E MARGIN	SCHEDULED	RESER	VE MARGIN
	CAPACITY	IMPORT	EXPORT	QF	AVAILABLE	DEMAND	BEFORE N	IAINTÉNANCE	MAINTÉNANCE	AFTER M	AINTENANCE
YEAR	MW	MW	MW	MW	MW	MW	MW	% OF PEAK	MW	MW	% OF PEAK
2005/06	9,757	617	0	813	11,187	9,047	2,140	24%	0	2,140	24%
2006/07	9.757	1,117	0	802	11,675	9,584	2,092	22%	0	2,092	22%
2007/08	10.274	1.137	0	798	12,209	9,780	2,429	25%	0	2.429	25%
2008/09	10,656	1,137	0	798	12,591	10.134	2,457	24%	0	2,457	24%
2009/10	11,057	1,137	0	798	12,992	13.524	2.468	23%	0	2.468	23%
2010/11	11.248	1,002	0	798	13,048	10.727	2,321	22%	0	2,321	22%
2011/12	11,798	932	0	798	13,528	10,975	2,553	23%	0	2,553	23%
2012/13	11,989	932	0	798	13,719	11,203	2,516	22%	0	2,516	22%
2013/14	12,739	932	0	513	14,184	11,427	2,757	24%	0	2,757	24%
2014/15	13,489	412	0	501	14,402	11.634	2,768	24%	0	2,768	24%

\* Includes Seasonal Purchase of 500 MW in 2006/07.

The recently issued Clean Air Interstate Rule (CAIR) may impact PEF's need for new capacity. While a compliance plan has not yet been finalized, some alternatives may impact the capacity of existing and/or future generation resources, resulting in a need for additional capacity. Once the compliance plan has been finalized, PEF will quantify the impacts on generating resources and determine if any additional capacity is needed.

#### SCHEDULE 8 PLANNED AND PROSPECTIVE GENERATING FACILITY ADDITIONS AND CHANGES

#### AS OF JANUARY 1, 2006 THROUGH DECEMBER 31, 2015

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
								CONST.	COM'L IN-	EXPECTED	GEN. MAX.	NET CAPA	BILITY		
	UNIT	LOCATION	UNIT	FL	EL.	FUEL TR	ANSPORT	START	SERVICE	RETIREMENT	NAMEPLATE	SUMMER	WINTER		
PLANT NAME	NO.	(COUNTY)	<u>type</u>	<u>PR1.</u>	ALT.	PRI.	ALT.	<u>MO. / YR</u>	<u>MO. / YR</u>	MO. / YR	KW	MW	MW	STATUS	NOTES
HINES ENERGY COMPLEX	4	POLK	сс	NG	DFO	PL	TK	12/2005	12/2007			461	517	U	
BARTOW CT	5,6	PINELLAS	CŤ	NG	DFO	PL	ΤK	12/2006	12/2008			322	382	Ρ	(1)
CRYSTAL RIVER	5	CITRUS	ST	BIT		WA			04/2009			(22)	(22)	Ρ	(2)
BARTOW CC	1	PINELLAS	сс	NG	DFO	PL	WA	12/2006	06/2009			837	897	Ρ	(1)
BARTOW	1-3	PINELLAS	ST	RFO		WA			-	06/2009		(444)	(452)	P	(1)
CRYSTAL RIVER	4	CITRUS	ST	BIT		WA			11/2009			(22)	(22)	₽	(2)
COMBUSTION TURBINE	1	UNKNOWN	GT	NG	DFO	PL	ΤK	06/2009	06/2010			161	191	Ρ	
COMBINED CYCLE	1	UNKNOWN	сс	NG	DFO	PL	тĸ	01/2009	06/2011			478	550	P	
COMBUSTION TURBINE	2	UNKNOWN	GT	NG	DFO	PL	тк	06/2011	06/2012			161	191	Ρ	
P-COAL, Supercritical	1	UNKNOWN	ST	BIT		RR		06/2008	06/2013			750	750	P	
P-COAL. Supercritical	2	UNKNOWN	ST	BIT		RR		06/2009	06/2014			750	750	Ρ	
COMBINED CYCLE	2	UNKNOWN	сс	NG	DFO	PL	тк	01/2013	06/2015			478	550	P	

NOTES

 As part of the Bartow Repowering Project, two CTs will go into service 12/2008. In June of 2009, they will be combined with an additional two CTs. four HRSGs, and one steam turbine to produce a single, 4x4x1 combined cycle with a total summer capacity of 1,159 MW.

(2) Derations due to FDG scrubber installations.

### SCHEDULE 9 STATUS REPORT AND SPECIFICATIONS OF PROPOSED GENERATING FACILITIES AS OF JANUARY 1, 2006

(1)	Plant Name and Unit Number:	HINES ENERGY COMPLEX UNIT #4
(2)	Capacity a. Summer: b. Winter:	461 517
(3)	Technology Type:	COMBINED CYCLE
(4)	Anticipated Construction Timing a. Field construction start date: b. Commercial in-service date:	12/2005 12/2007 (EXPECTED)
(5)	Fuel a. Primary fuel: b. Alternate fuel:	NATURAL GAS DISTILLATE FUEL OIL
(6)	Air Pollution Control Strategy:	DRY LOW NOX COMBUSTION with SELECTIVE CATALYTIC REDUCTION
(7)	Cooling Method:	COOLING POND
(8)	Total Site Area:	8,200 ACRES
<b>(9)</b>	Construction Status:	REGULATORY APPROVAL RECEIVED UNDER CONSTRUCTION
(10)	Certification Status:	SITE PERMITTED
(11)	Status with Federal Agencies:	SITE PERMITTED
(12)	Projected Unit Performance Data a. Planned Outage Factor (POF): b. Forced Outage Factor (FOF): c. Equivalent Availability Factor (EAF): d. Resulting Capacity Factor (%): e. Average Net Operating Heat Rate (ANOHR):	6.0 % 3.0 % 91.2 % 47.0 % 7,915 BTU/kWh
(13)	<ul> <li>Projected Unit Financial Data</li> <li>a. Book Life (Years):</li> <li>b. Total Installed Cost (In-service year \$/kW):</li> <li>c. Direct Construction Cost (\$/kW):</li> <li>d. AFUDC Amount (\$/kW):</li> <li>e. Escalation (\$/kW):</li> <li>f. Fixed O&amp;M (\$/kW-yr):</li> <li>g. Variable O&amp;M (\$/MWh):</li> <li>h. K Factor:</li> </ul>	25 495.40 443.09 52.31 0.00 1.26 2.38 NO CALCULATION

### SCHEDULE 9 STATUS REPORT AND SPECIFICATIONS OF PROPOSED GENERATING FACILITIES AS OF JANUARY 1, 2006

(1)	Plant Name and Unit Number:	BARTOW REPOWERING
(2)	Capacity a. Summer: b. Winter:	1,159 1,279
(3)	Technology Type:	COMBINED CYCLE
(4)	Anticipated Construction Timing a. Field construction start date: b. Commercial in-service date:	12/2006 06/2009 (EXPECTED)
(5)	Fuel a. Primary fuel: b. Alternate fuel:	NATURAL GAS DISTILLATE FUEL OIL
(6)	Air Pollution Control Strategy:	DRY LOW NOx COMBUSTION
(7)	Cooling Method:	COOLING WATER
(8)	Total Site Area:	1,348 ACRES
(9)	Construction Status:	PLANNED
(10)	Certification Status:	N/A
(11)	Status with Federal Agencies:	PLANNED
(12)	Projected Unit Performance Data a. Planned Outage Factor (POF): b. Forced Outage Factor (FOF): c. Equivalent Availability Factor (EAF): d. Resulting Capacity Factor (%): e. Average Net Operating Heat Rate (ANOHR):	6.9 % 4.6 % 88.8 % 53.9 % 7,236 BTU/kWh
(13)	<ul> <li>Projected Unit Financial Data</li> <li>a. Book Life (Years):</li> <li>b. Total Installed Cost (In-service year \$/kW):</li> <li>c. Direct Construction Cost (\$/kW):</li> <li>d. AFUDC Amount (\$/kW):</li> <li>e. Escalation (\$/kW):</li> <li>f. Fixed O&amp;M (\$/kW-yr):</li> <li>g. Variable O&amp;M (\$/MWh):</li> <li>h. K Factor:</li> </ul>	25 435.08 403.56 31.52 0.00 4.53 2.50 NO CALCULATION

#### SCHEDULE 9 STATUS REPORT AND SPECIFICATIONS OF PROPOSED GENERATING FACILITIES AS OF JANUARY 1, 2006

(1)	Plant Name and Unit Number:	SIMPLE CYCLE 1
(2)	Capacity a. Summer: b. Winter:	161 191
(3)	Technology Type:	SIMPLE CYCLE
(4)	Anticipated Construction Timing a. Field construction start date: b. Commercial in-service date:	06/2009 06/2010 (EXPECTED)
(5)	Fuel a. Primary fuel: b. Alternate fuel:	NATURAL GAS DISTILLATE FUEL OIL
(6)	Air Pollution Control Strategy:	DRY LOW NOx COMBUSTION
(7)	Cooling Method:	N/A
(8)	Total Site Area:	UNKNOWN ACRES
(9)	Construction Status:	PLANNED
(10)	Certification Status:	PLANNED
(11)	Status with Federal Agencies:	PLANNED
(12)	Projected Unit Performance Data a. Planned Outage Factor (POF): b. Forced Outage Factor (FOF): c. Equivalent Availability Factor (EAF): d. Resulting Capacity Factor (%): e. Average Net Operating Heat Rate (ANOHR):	6.9 % 4.7 % 88.7 % 1.3 % 10,579 BTU/kWh
(13)	<ul> <li>Projected Unit Financial Data</li> <li>a. Book Life (Years):</li> <li>b. Total Installed Cost (In-service year \$/kW):</li> <li>c. Direct Construction Cost (\$/kW):</li> <li>d. AFUDC Amount (\$/kW):</li> <li>e. Escalation (\$/kW):</li> <li>f. Fixed O&amp;M (\$/kW-yr):</li> <li>g. Variable O&amp;M (\$/MWh):</li> <li>h. K Factor:</li> </ul>	25 349.59 273.09 35.84 40.66 2.16 10.64 NO CALCULATION

#### SCHEDULE 9 STATUS REPORT AND SPECIFICATIONS OF PROPOSED GENERATING FACILITIES AS OF JANUARY 1, 2006

(1)	Plant Name and Unit Number:	COMBINED CYCLE 1
(2)	Capacity a. Summer: b. Winter:	478 550
(3)	Technology Type:	COMBINED CYCLE
(4)	Anticipated Construction Timing a. Field construction start date: b. Commercial in-service date:	01/2009 06/2011 (EXPECTED)
(5)	Fuel a. Primary fuel: b. Alternate fuel:	NATURAL GAS DISTILLATE FUEL OIL
(6)	Air Pollution Control Strategy:	DRY LOW NOx COMBUSTION with SELECTIVE CATALYTIC REDUCTION
(7)	Cooling Method:	UNKNOWN
(8)	Total Site Area:	UNKNOWN ACRES
(9)	Construction Status:	PLANNED
(10)	Certification Status:	PLANNED
(11)	Status with Federal Agencies:	PLANNED
(12)	<ul> <li>Projected Unit Performance Data</li> <li>a. Planned Outage Factor (POF):</li> <li>b. Forced Outage Factor (FOF):</li> <li>c. Equivalent Availability Factor (EAF):</li> <li>d. Resulting Capacity Factor (%):</li> <li>e. Average Net Operating Heat Rate (ANOHR):</li> </ul>	6.9 % 4.6 % 88.8 % 58.3 % 7,461 BTU/kWh
(13)	Projected Unit Financial Data a. Book Life (Years): b. Total Installed Cost (In-service year \$/kW): c. Direct Construction Cost (\$/kW): d. AFUDC Amount (\$/kW): e. Escalation (\$/kW): f. Fixed O&M (\$/kW-yr): g. Variable O&M (\$/MWh): h. K Factor:	25 486.17 352.00 70.02 64.15 2.03 1.21 NO CALCULATION

#### SCHEDULE 9 STATUS REPORT AND SPECIFICATIONS OF PROPOSED GENERATING FACILITIES AS OF JANUARY 1, 2006

(1)	Plant Name and Unit Number:	SIMPLE CYCLE 2
(2)	Capacity a. Summer: b. Winter:	161 191
. (3)	Technology Type:	SIMPLE CYCLE
(4)	Anticipated Construction Timing a. Field construction start date: b. Commercial in-service date:	06/2011 06/2012 (EXPECTED)
(5)	Fuel a. Primary fuel: b. Alternate fuel:	NATURAL GAS DISTILLATE FUEL OIL
(6)	Air Pollution Control Strategy:	DRY LOW NOx COMBUSTION
(7)	Cooling Method:	N/A
(8)	Total Site Area:	UNKNOWN ACRES
(9)	Construction Status:	PLANNED
(10)	Certification Status:	PLANNED
(11)	Status with Federal Agencies:	PLANNED
(12)	Projected Unit Performance Data a. Planned Outage Factor (POF): b. Forced Outage Factor (FOF): c. Equivalent Availability Factor (EAF): d. Resulting Capacity Factor (%): e. Average Net Operating Heat Rate (ANOHR):	6.9 % 4.7 % 88.7 % 1.3 % 10,579 BTU/kWh
(13)	<ul> <li>Projected Unit Financial Data</li> <li>a. Book Life (Years):</li> <li>b. Total Installed Cost (In-service year \$/kW):</li> <li>c. Direct Construction Cost (\$/kW):</li> <li>d. AFUDC Amount (\$/kW):</li> <li>e. Escalation (\$/kW):</li> <li>f. Fixed O&amp;M (\$/kW-yr):</li> <li>g. Variable O&amp;M (\$/MWh):</li> <li>h. K Factor:</li> </ul>	25 369.08 273.09 37.84 58.15 2.16 10.64 NO CALCULATION

#### SCHEDULE 9 STATUS REPORT AND SPECIFICATIONS OF PROPOSED GENERATING FACILITIES AS OF JANUARY 1, 2006

(1)	Plant Name and Unit Number:	COAL-1
(2)	Capacity a. Summer: b. Winter:	750 750
(3)	Technology Type:	PULVERIZED COAL-SUPERCRITICAL
(4)	Anticipated Construction Timing a. Field construction start date: b. Commercial in-service date:	06/2008 06/2013 (EXPECTED)
(5)	Fuel a. Primary fuel: b. Alternate fuel:	BITUMINOUS
(6)	Air Pollution Control Strategy (a):	LOW-NOX BURNERS, SELECTIVE
(7)	Cooling Method:	UNKNOWN
(8)	Total Site Area:	UNKNOWN ACRES
(9)	Construction Status:	PLANNED
(10)	Certification Status:	PLANNED
(11)	Status with Federal Agencies:	PLANNED
(12)	Projected Unit Performance Data a. Planned Outage Factor (POF): b. Forced Outage Factor (FOF): c. Equivalent Availability Factor (EAF): d. Resulting Capacity Factor (%): e. Average Net Operating Heat Rate (ANOHR):	4.8 % 4.2 % 91.2 % 89.5 % 8,712 BTU/kWh
(13)	<ul> <li>Projected Unit Financial Data</li> <li>a. Book Life (Years):</li> <li>b. Total Installed Cost (In-service year \$/kW):</li> <li>c. Direct Construction Cost (\$/kW):</li> <li>d. AFUDC Amount (\$/kW):</li> <li>e. Escalation (\$/kW):</li> <li>f. Fixed O&amp;M (\$/kW-yr):</li> <li>g. Variable O&amp;M (\$/MWh):</li> <li>h. K Factor:</li> </ul>	40 1651.57 1143.70 224.49 283.38 31.94 3.21 NO CALCULATION
Culture		

(a) Subject to future requirements

## SCHEDULE 9 STATUS REPORT AND SPECIFICATIONS OF PROPOSED GENERATING FACILITIES AS OF JANUARY 1, 2006

(1)	Plant Name and Unit Number:	COAL-2
(2)	Capacity a. Summer: b. Winter:	750 . 750
(3)	Technology Type:	PULVERIZED COAL-SUPERCRITICAL
(4)	Anticipated Construction Timing a. Field construction start date: b. Commercial in-service date:	06/2009 06/2014 (EXPECTED)
(5)	Fuel a. Primary fuel: b. Alternate fuel:	BITUMINOUS
(6)	Air Pollution Control Strategy (a):	LOW-NOX BURNERS, SELECTIVE
(7)	Cooling Method:	UNKNOWN
(8)	Total Site Area:	UNKNOWN ACRES
(9)	Construction Status:	PLANNED
(10)	Certification Status:	PLANNED
(11)	Status with Federal Agencies:	PLANNED
(12)	Projected Unit Performance Data a. Planned Outage Factor (POF): b. Forced Outage Factor (FOF): c. Equivalent Availability Factor (EAF): d. Resulting Capacity Factor (%): e. Average Net Operating Heat Rate (ANOHR):	4.8 % 4.2 % 91.2 % 89.5 % 8,712 BTU/kWh
(13)	<ul> <li>Projected Unit Financial Data</li> <li>a. Book Life (Years):</li> <li>b. Total Installed Cost (In-service year \$/kW):</li> <li>c. Direct Construction Cost (\$/kW):</li> <li>d. AFUDC Amount (\$/kW):</li> <li>e. Escalation (\$/kW):</li> <li>f. Fixed O&amp;M (\$/kW-yr):</li> <li>g. Variable O&amp;M (\$/MWh):</li> <li>h. K Factor:</li> </ul>	40 1696.99 1143.70 230.66 322.63 31.94 3.21 NO CALCULATION

(a) Subject to future requirements

#### SCHEDULE 9 STATUS REPORT AND SPECIFICATIONS OF PROPOSED GENERATING FACILITIES AS OF JANUARY 1, 2006

(1)	Plant Name and Unit Number:	COMBINED CYCLE 2
(2)	Capacity a. Summer: b. Winter:	478 550
(3)	Technology Type:	COMBINED CYCLE
.(4)	Anticipated Construction Timing a. Field construction start date: b. Commercial in-service date:	01/2013 06/2015 (EXPECTED)
(5)	Fuel a. Primary fuel: b. Alternate fuel:	NATURAL GAS DISTILLATE FUEL OIL
(6)	Air Pollution Control Strategy:	DRY LOW NOX COMBUSTION with SELECTIVE CATALYTIC REDUCTION
(7)	Cooling Method:	UNKNOWN
(8)	Total Site Area:	UNKNOWN ACRES
(9)	Construction Status:	PLANNED
(10)	Certification Status:	PLANNED
(11)	Status with Federal Agencies:	PLANNED
(1 <i>2</i> )	Projected Unit Performance Data a. Planned Outage Factor (POF): b. Forced Outage Factor (FOF): c. Equivalent Availability Factor (EAF): d. Resulting Capacity Factor (%): e. Average Net Operating Heat Rate (ANOHR):	6.9 % 4.6 % 88.8 % 58.3 % 7,461 BTU/kWh
(13)	<ul> <li>Projected Unit Financial Data</li> <li>a. Book Life (Years):</li> <li>b. Total Installed Cost (In-service year \$/kW):</li> <li>c. Direct Construction Cost (\$/kW):</li> <li>d. AFUDC Amount (\$/kW):</li> <li>e. Escalation (\$/kW):</li> <li>f. Fixed O&amp;M (\$/kW-yr):</li> <li>g. Variable O&amp;M (\$/MWh):</li> <li>h. K Factor:</li> </ul>	25 541.89 352.00 78.05 111.84 2.03 1.21 NO CALCULATION

#### SCHEDULE 10 STATUS REPORT AND SPECIFICATIONS OF PROPOSED DIRECTLY ASSOCIATED TRANSMISSION LINES

#### HINES UNIT #4

(1) POINT OF ORIGIN AND TERMINATION:	West Lake Wales Substation-Hines Energy Complex
(2) NUMBER OF LINES:	1
(3) RIGHT-OF-WAY:	Existing Hines Energy Complex Site and new transmission right-of-way
(4) LINE LENGTH:	21
(5) VOLTAGE:	230kV
(6) ANTICIPATED CONSTRUCTION TIMING:	6/2007
(7) ANTICIPATED CAPITAL INVESTMENT:	\$32,987,944 *
(8) SUBSTATIONS:	N/A
(9) PARTICIPATION WITH OTHER UTILITIES:	N/A

As recognized by the Florida Public Service Commission in its Order Granting Petition for Determination of Need for Hines Unit \* 4, the projected capital estimate may vary during construction of the Hines 4 facility.

#### SCHEDULE 10 STATUS REPORT AND SPECIFICATIONS OF PROPOSED DIRECTLY ASSOCIATED TRANSMISSION LINES

#### BARTOW REPOWERING

(1) POINT OF ORIGIN AND TERMINATION:	Bartow Plant - Northeast Substation
(2) NUMBER OF LINES:	3
(3) RIGHT-OF-WAY:	Existing transmission line right-of-way
(4) LINE LENGTH:	4
(5) VOLTAGE:	230kV
(6) ANTICIPATED CONSTRUCTION TIMING:	09/2008
(7) ANTICIPATED CAPITAL INVESTMENT:	\$74,005,735 *
(8) SUBSTATIONS:	N/A
(9) PARTICIPATION WITH OTHER UTILITIES:	N/A

#### SCHEDULE 10 STATUS REPORT AND SPECIFICATIONS OF PROPOSED DIRECTLY ASSOCIATED TRANSMISSION LINES

#### BARTOW REPOWERING

(1) POINT OF ORIGIN AND TERMINATION:	Northeast Substation - Thirty-Second Street Substation
(2) NUMBER OF LINES:	1
(3) RIGHT-OF-WAY:	New and existing transmission line right-of-ways
(4) LINE LENGTH:	2
(5) VOLTAGE:	115kV
(6) ANTICIPATED CONSTRUCTION TIMING:	09/2008
(7) ANTICIPATED CAPITAL INVESTMENT:	\$4,000,000 *
(8) SUBSTATIONS:	Thirty-Second Street Substation - Addition
(9) PARTICIPATION WITH OTHER UTILITIES:	N/A

#### SCHEDULE 10 STATUS REPORT AND SPECIFICATIONS OF PROPOSED DIRECTLY ASSOCIATED TRANSMISSION LINES

#### BARTOW REPOWERING

(1) POINT OF ORIGIN AND TERMINATION:	Northeast Substation - Fortieth Street Substation
(2) NUMBER OF LINES:	1
(3) RIGHT-OF-WAY:	Existing transmission line right-of-ways
(4) LINE LENGTH:	8
(5) VOLTAGE:	230kV
(6) ANTICIPATED CONSTRUCTION TIMING:	09/2008
(7) ANTICIPATED CAPITAL INVESTMENT:	\$8,000,000 *
(8) SUBSTATIONS:	N/A
(9) PARTICIPATION WITH OTHER UTILITIES:	N/A

#### SCHEDULE 10 STATUS REPORT AND SPECIFICATIONS OF PROPOSED DIRECTLY ASSOCIATED TRANSMISSION LINES

#### BARTOW REPOWERING

(1) POINT OF ORIGIN AND TERMINATION:	Pasadena Substation - Fifty-First Street Substation
(2) NUMBER OF LINES:	1
(3) RIGHT-OF-WAY:	Existing transmission line right-or-way
(4) LINE LENGTH:	0.4
(5) VOLTAGE:	230kV
(6) ANTICIPATED CONSTRUCTION TIMING:	09/2008
(7) ANTICIPATED CAPITAL INVESTMENT:	\$5,000,000 *
(8) SUBSTATIONS:	Fifty-First Street Substation - Addition
(9) PARTICIPATION WITH OTHER UTILITIES:	N/A

## INTEGRATED RESOURCE PLANNING OVERVIEW

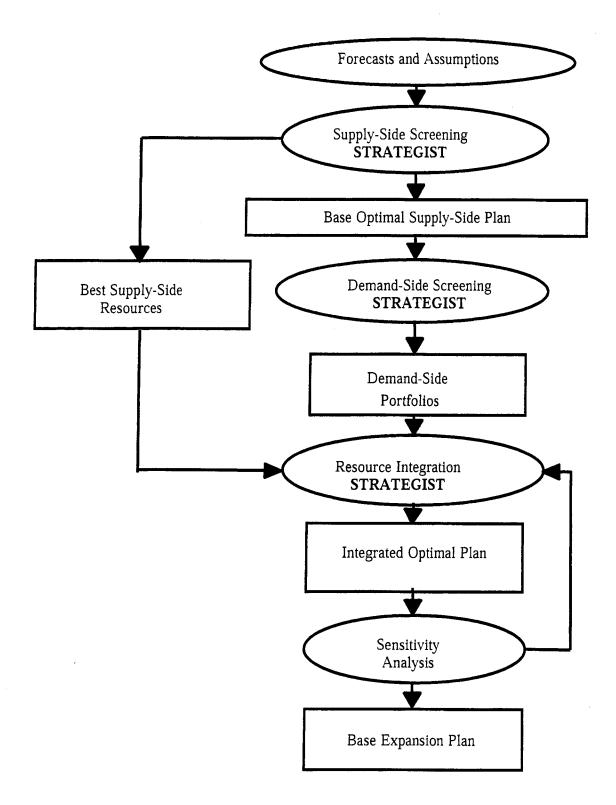
PEF employs an Integrated Resource Planning (IRP) process to determine the most cost-effective mix of supply- and demand-side alternatives that will reliably satisfy our customers' future demand and energy needs. PEF's IRP process incorporates state-of-the-art computer models used to evaluate a wide range of future generation alternatives and cost-effective conservation and dispatchable demand-side management programs on a consistent and integrated basis.

An overview of PEF's IRP Process is shown in Figure 3.1. The process begins with the development of various forecasts, including demand and energy, fuel prices, and economic assumptions. Future supply- and demand-side resource alternatives are identified and extensive cost and operating data are collected to enable these to be modeled in detail. These alternatives are optimized together to determine the most cost-effective plan for PEF to pursue over the next ten years to meet the company's reliability criteria. The resulting ten-year plan, the Integrated Optimal Plan, is then tested under different relevant sensitivity scenarios to identify variances, if any, which would warrant reconsideration of any of the base plan assumptions. If the plan is judged robust under sensitivity analysis and works within the corporate framework, it evolves as the Base Expansion Plan. This process is discussed in more detail in the following section titled "The IRP Process".

The Integrated Resource Plan provides PEF with substantial guidance in assessing and optimizing the Company's overall resource mix on both the supply side and the demand side. When a decision supporting a significant resource commitment is being developed (e.g. plant construction, power purchase, DSM program implementation), the Company will move forward with directional guidance from the IRP and delve much further into the specific levels of examination required. This more detailed assessment will typically address very specific technical requirements and cost estimates, detailed corporate financial considerations, and the most current dynamics of the business and regulatory environments.

## FIGURE 3.1

## **IRP Process Overview**



#### THE IRP PROCESS

#### Forecasts and Assumptions

The evaluation of possible supply- and demand-side alternatives, and development of the optimal plan, is an integral part of the IRP process. These steps together comprise the integration process that begins with the development of forecasts and collection of input data. Base forecasts that reflect PEF's view of the most likely future scenarios are developed, along with high and low forecasts that reflect alternative future scenarios. Computer models used in the process are brought up-to-date to reflect this data, along with the latest operating parameters and maintenance schedules for PEF's existing generating units. This establishes a consistent starting point for all further analysis.

#### Reliability Criteria

Utilities require a margin of generating capacity above the firm demands of their customers in order to provide reliable service. Periodic scheduled outages are required to perform maintenance and inspections of generating plant equipment and to refuel nuclear plants. At any given time during the year, some capacity may be out of service due to unanticipated equipment failures resulting in forced outages of generation units. Adequate reserve capacity must be available to accommodate these outages and to compensate for higher than projected peak demand due to forecast uncertainty and abnormal weather. In addition, some capacity must be available for operating reserves to maintain the balance between supply and demand on a moment-to-moment basis.

PEF plans its resources in a manner consistent with utility industry planning practices, and employs both deterministic and probabilistic reliability criteria in the resource planning process. A Reserve Margin criterion is used as a deterministic measure of PEF's ability to meet its forecasted seasonal peak load with firm capacity. PEF plans its resources to satisfy a 20 percent minimum Reserve Margin criterion.

Loss of Load Probability (LOLP) is a probabilistic criterion that measures the probability that a company will be unable to meet its load throughout the year. While Reserve Margin only considers the peak load and amount of installed resources, LOLP also takes into account generating unit sizes, capacity mix, maintenance scheduling, unit availabilities, and capacity assistance available from

other utilities. A standard probabilistic reliability threshold commonly used in the electric utility industry, and the criterion employed by PEF, is a maximum of one day in ten years loss of load probability.

PEF has based its resource planning on the use of dual reliability criteria since the early 1990s, a practice that has been accepted by the FPSC. PEF's resource portfolio is designed to satisfy the minimum 20% Reserve Margin requirement and probabilistic analyses are conducted to ensure that the one day in ten years LOLP criterion is also satisfied. By using both the Reserve Margin and LOLP planning criteria, PEF's resource portfolio is designed to have sufficient capacity available to meet customer peak demand, and to provide reliable generation service under all expected load conditions.

#### Supply-Side Screening

Potential supply-side resources are screened to determine those that are the most cost-effective. Data used for the screening analysis is compiled from various industry sources and PEF's experiences. The wide range of resource options is pre-screened to set aside those that do not warrant a detailed cost-effectiveness analysis. Typical screening criteria are costs, fuel source, technology maturity, environmental parameters, and overall resource feasibility.

Economic evaluation of generation alternatives is performed using the STRATEGIST optimization program. The optimization program evaluates revenue requirements for specific resource plans generated from multiple combinations of future resource additions that meet system reliability criteria and other system constraints. All resource plans are then ranked by system revenue requirements. The optimization run produces the optimal supply-side resource plan, which is considered the "Base Optimal Supply-Side Plan."

#### Demand-Side Screening

Like supply-side resources, data for large numbers of potential demand-side resources is also collected. These resources are pre-screened to eliminate those alternatives that are still in research and development, addressed by other regulations (building code), or not applicable to PEF's

customers. STRATEGIST is updated with cost data and load impact parameters for each potential DSM measure to be evaluated.

The Base Optimal Supply-Side Plan is used to establish avoidable units for screening future demand-side resources. Each future demand-side alternative is individually tested in this plan over the ten-year planning horizon to determine the benefit or detriment that the addition of this demand-side resource provides to the overall system. STRATEGIST calculates the benefits and costs for each demand-side measure evaluated and reports the appropriate ratios for the Rate Impact Measure (RIM), the Total Resource Cost Test (TRC), and the Participant Test. Demand-side programs that pass the RIM test are then bundled together to create demand-side portfolios. These portfolios contain the appropriate DSM options and make the optimization solvable with the STRATEGIST model.

#### **Resource Integration and the Integrated Optimal Plan**

The cost-effective generation alternatives and the demand-side portfolios developed in the screening process can then be optimized together to formulate an Integrated Optimal Plan. The optimization program considers all possible future combinations of supply- and demand-side alternatives that meet the company's reliability criteria in each year of the ten-year study period and reports those that provide both flexibility and low revenue requirements for PEF's ratepayers.

#### Developing the Base Expansion Plan

The plans that provide the lowest revenue requirements are then further tested using sensitivity analysis. The economics of the plan may be evaluated under high and low forecast scenarios for load, fuel, and financial assumptions, or any other sensitivities which, in the judgment of the planner, are relevant given existing circumstances to ensure that the plan does not unduly burden the company or the ratepayers if the future unfolds in a manner significantly different from the base forecasts. From the sensitivity assessment, the ten-year plan that is identified as achieving the best balance of flexibility and cost is then reviewed within the corporate framework to determine how the plan potentially impacts or is impacted by many other factors. If the plan is judged robust under this review, it evolves as the Base Expansion Plan.

## **KEY CORPORATE FORECASTS**

## Load Forecast

The assumptions and methodology used to develop the base case load and energy forecast is described in detail in Chapter 2 of this TYSP.

## Fuel Forecast

*Base Fuel Case:* The base case fuel price forecast was developed using short-term and long-term market price projections from industry-recognized sources. Coal prices are expected to be relatively stable month to month; however, oil and natural gas prices are expected to be more volatile on a day-to-day and month-to-month basis.

In the short term, the base cost for coal is based on the existing contractual structure between Progress Fuels Corporation (PFC) and PEF and both contract and spot market coal and transportation arrangements between PFC and its various suppliers. For the longer term, the costs are based on market forecasts reflective of expected market conditions. Oil and natural gas prices are estimated based on current and expected contracts and spot purchase arrangements as well as near-term and long-term market forecasts. Oil and natural gas commodity prices are driven primarily by open market forces of supply and demand. Natural gas firm transportation cost is determined primarily by pipeline tariff rates and tends to change less frequently than commodity prices.

## Financial Forecast

The key financial assumptions used in PEF's most recent planning studies were 48% debt and 52% equity capital structure, projected debt cost of 6.5%, and an equity return of 12.0%. These assumptions resulted in a weighted average cost of capital of 9.36% and an after-tax discount rate of 8.16%.

## **TYSP RESOURCE ADDITIONS**

In this TYSP, PEF's supply-side resources include the projected combined cycle (CC) expansion of the Hines Energy Complex (HEC) with Unit 4 forecasted to be in-service by December 2007. The TYSP also includes repowering the Bartow Steam Units with F-Class combined cycle

technology that would provide a portion of the capacity in-service by December 2008 with the completed combined cycle facility in-service by June 2009. Two generic combustion turbine units and two generic combined cycle units are included in the TYSP with forecasted in-service dates of June 2010 and June 2012 for the CTs and June 2011 and June 2015 for the CCs.

The Company continues to study the economics of baseload generation alternatives including gas, coal, and nuclear options. Analyses indicate that coal and nuclear resources may provide economical baseload generation in the long-term. This TYSP thus includes the addition of two supercritical pulverized coal units during the planning horizon with forecasted in-service dates of June 2013 and June 2014. The Company has also announced its intent to file a combined construction permit-operating license (COL) application for a potential new nuclear facility in Florida with a possible in-service date beyond the 2015 planning horizon.

The economics of the baseload alternatives are partly dependent on legislation, projected load growth, fuel prices, and environmental compliance considerations. Although PEF has not committed to building a new coal or nuclear facility, the Company will continue to examine the merits of new generation alternatives and adjust its resource plans accordingly to ensure the optimal selection of resource additions. The Company is also currently conducting detailed analyses of generation sites and has not finalized its decision on the preferred site(s) for possible future generic combined cycle, coal, and nuclear additions.

#### PLAN SENSITIVITIES

#### Load Forecast

In general, higher-than-projected load growth would shift the need for new capacity to an earlier year and lower-than-projected load growth would delay the need for new resources. PEF's TYSP includes the Hines 4 addition and Bartow repowering projects in the near term, with generic CT, CC, and coal additions in the longer term. The Company's resource plan would provide the flexibility to shift certain resources to earlier or later in-service dates should a significant change in projected customer demand begin to materialize. PEF therefore did not conduct detailed sensitivity analyses of the plan to the base case load forecast.

#### Fuel Forecast

PEF's current TYSP includes new natural gas fueled resources through 2012. The plan also includes coal units in 2013 and 2014, with 2013 being the earliest possible date that a new coal plant can be placed in-service. PEF focused its fuel forecast sensitivity on price projections for natural gas. Higher gas prices would improve the economics for pulverized coal; however, this scenario would not impact the schedule of resource additions since 2013 is the earliest date that a new coal plant can be placed in-service. PEF conducted a sensitivity analysis of the plan to lower gas prices relative to the base forecast. Results for the low gas price scenario did not shift the in-service date for the 2013 and 2014 coal units, which indicate the potential for new coal fired generation to remain economical in the long-term.

The fuel price forecasts used in development of the TYSP show a greater differential in gas/oil versus coal prices in the early years, with the differential decreasing in 2009 and increasing again beginning 2016. Similar to the discussion above, a higher differential between gas/oil and coal prices would improve the economics for pulverized coal; however, the TYSP already includes coal in the resource mix beginning June 2013 which is the earliest year that a coal plant can be constructed and placed in-service. Similarly, a smaller differential in gas/oil versus coal prices would benefit the economics for a combined cycle plant; however, the low gas price forecast sensitivity discussed above still resulted in coal units included in the optimal plan.

Fuel price forecasts can have a significant impact on the economics of generation alternatives. Results of the fuel forecast sensitivity analysis conducted for this TYSP did not suggest any significant reconsideration of the base plan. PEF will continue to monitor fuel price relationships to identify long-term structural changes and assess the potential impacts on the economics of resource selection.

#### Financial Forecast

PEF's current TYSP includes combustion turbine and combined cycle additions through 2012 with pulverized coal additions in 2013 and 2014. Lower cost of capital escalation and escalation rates would favor options with longer construction lead times and higher capital costs such as the pulverized coal additions. However, PEF does not expect these assumptions to go much lower than

the current base case forecast and, in any event, coal units likely cannot be added any sooner than 2013 as shown in the base plan. Higher financial assumptions would disfavor the pulverized coal additions; however, the Company has not committed to building new coal generation at this time. Thus, PEF did not test the sensitivity of the base resource plan to varying financial assumptions. PEF will continue to assess the economics of future generation alternatives including consideration of the uncertainties in planning assumptions.

## TRANSMISSION PLANNING

PEF's transmission planning assessment practices are developed to test the ability of the planned system to meet the reliability criteria as outlined in the FERC Form 715 filing. This involves the use of load flow and transient stability programs to model various contingency situations that may occur, and determining if the system response meets the reliability criteria. In general, this involves running simulations for the loss of any single line, generator, or transformer. PEF normally runs this analysis for system load levels from minimum to peak for all possible contingencies, and for both summer and winter. Additional studies are performed to determine the system response to credible, less probable criteria, to assure the system meets PEF and Florida Reliability Coordinating Council, Inc. (FRCC) criteria. These studies include the loss of multiple generators or lines, and combinations of each, and some load loss is permissible under these more severe disturbances. These credible, less probable scenarios are also evaluated at various load levels, since some of the more severe situations occur at average or minimum load conditions. In particular, critical fault clearing times are typically the shortest (most severe) at minimum load conditions, with just a few large base load units supplying the system needs.

As noted in the PEF reliability criteria, some remedial actions are allowed to reduce system loadings, in particular, sectionalizing is allowed to reduce loading on lower voltage lines for bulk system contingencies, but the risk to load on the sectionalized system must be reasonable (it would not be considered prudent to operate for long periods with a sectionalized system). In addition, the number of remedial action steps and the overall complexity of the scheme are evaluated to determine overall acceptability.

3-29

Presently, PEF uses the following reference documents to calculate Available Transfer Capability (ATC) for required transmission path postings on the Florida Open Access Same-Time Information System (OASIS):

• FRCC: FRCC ATC Calculation and Coordination Procedures, November 4, 2003, which is posted on the FRCC website:

(http://frcc.com/downloads/FRCC%20ATC%20methodology-%20final-11-03.pdf)

- NERC: Transmission Transfer Capability, May 1, 1995
- NERC: Available Transfer Capability Definitions and Determination, July 30, 1996

PEF uses the FRCC Capacity Benefit Margin (CBM) methodology to assess its CBM needs. This methodology is:

"FRCC Transmission Providers make an assessment of the CBM needed on their respective systems by using either deterministic or probabilistic generation reliability analysis. The appropriate amount of transmission interface capability is then reserved for CBM on a per interface basis, taking into account the amount of generation available on other interconnected systems, the respective load peaking diversities of those systems, and Transmission Reliability Margin (TRM). Operating reserves may be included if appropriate in TRM and subsequently subtracted from the CBM if needed."

PEF currently has zero CBM reserved on each of its interfaces (posted paths). PEF's CBM on each path is currently established through the transmission provider functions within PEF using deterministic and probabilistic generation reliability analysis.

Currently, PEF proposes no bulk transmission additions that must be certified under the Florida Transmission Line Siting Act (TLSA). PEF's proposed bulk transmission line additions are shown below: 4

## TABLE 3.3 PROGRESS ENERGY FLORIDA

## LIST OF PROPOSED BULK TRANSMISSION LINE ADDITIONS

			2006-2015			
MVA RATING WINTER	LINE OWNERSHIP	TERMIN	IALS	LINE LENGTH (CKT MILES)	COMMERCIAL IN-SERVICE DATE (MO./YEAR)	NOMINAL VOLTAGE (kV)
1141	PEF/FPL	VANDOLAH	CHARLOTTE	55*	12/2006	230
1141	PEF	HINES ENERGY COMPLEX	WEST LAKE WALES #1	21	6 / 2007	230
1141	PEF	LAKE BRYAN	WINDERMERE #1	10 *	1 / 2008	230
1141	PEF	LAKE BRYAN	WINDERMERE #2	10	1 / 2008	230
1141	PEF	AVALON	GIFFORD	7	7 / 2008	230
612	PEF	BARTOW	NORTHEAST Circuit 1	4	9/2008	230
612	PEF	BARTOW	NORTHEAST Circuit 2	4	9/2008	230
612	PEF	BARTOW	NORTHEAST Circuit 3	4	9/2008	230
525	PEF	NORTHEAST	32 <sup>ND</sup> STREET	2	9/2008	115
810	PEF	NORTHEAST	40 <sup>TH</sup> STREET	8*	9/2008	230
810	PEF	PASADENA	51 <sup>ST</sup> STREET	0.2	9/2008	230
810	PEF	51 <sup>ST</sup> STREET	40 <sup>TH</sup> STREET	0.2	9/2008	230
1141	PEF	INTERCESSION CITY	WEST LAKE WALES #2	30	6 / 2010	230
1141	PEF	HINES ENERGY COMPLEX	WEST LAKE WALES #2	21	5/2011	230
1141	PEF	INTERCESSION CITY	WEST LAKE WALES #1	30 *	6/2011	230

2006-2015

\* Rebuild existing circuit

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# CHAPTER 4

# ENVIRONMENTAL AND LAND USE INFORMATION



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# <u>CHAPTER 4</u> ENVIRONMENTAL AND LAND USE INFORMATION

#### PREFERRED SITES

PEF's base expansion plan proposes new combined cycle generation at the Hines Energy Complex (HEC) site in Polk County and to repower the existing Bartow Plant in Pinellas County with combined cycle technology. Although not delineated in the base expansion plan, potential peaking simple-cycle combustion turbine generation site options for the 2010 and 2012 units include Intercession City (Osceola County), Anclote (Pasco County), Bartow (Pinellas) and DeBary (Volusia County). While these sites are suitable for new generation, PEF continues to evaluate other available options for future supply alternatives.

The next proposed combined cycle unit at the HEC site is scheduled for commercial operation in December 2007. PEF will repower its existing Bartow Plant which is scheduled for commercial operation in June 2009. PEF continues to pursue siting opportunities for undesignated coal and combined cycle units with a commercial operation date of 2011 and beyond. PEF's existing sites, as identified in Table 3.1 of Chapter 3, include the capability to further develop generation. All appropriate permitting requirements will be addressed for PEF's preferred sites as discussed in the following site descriptions. The base expansion plan does not currently include any potential new sites for generation additions. Therefore, detailed environmental or land use data are not included.

The ability to site new baseload generation (coal and/or nuclear) in Florida is extremely limited, and PEF has not identified suitable sites for these technologies at this time. Siting studies are currently underway to identify possible sites for new baseload generation.

## HINES ENERGY COMPLEX SITE

In 1990, PEF completed a statewide search for a new 3,000 MW coal capable power plant site. As a result of this work, a large tract of mined-out phosphate land in south central Polk County was selected as the primary alternative. This 8,200-acre site is located south of the City of Bartow, near the cities of Fort Meade and Homeland, south of S.R. 640 and west of U.S. 17/98 (reference Figure 4.1). It is an area that has been extensively mined and remains predominantly unreclaimed.

The Governor and cabinet approved site certification for ultimate site development and construction of the first 470 MW increment on January 25, 1994, in accordance with the rules of the Power Plant Siting Act. Due to the thorough screening during the selection process, and the disturbed nature of the site, there were no major environmental limitations. As would be the situation at any location in the state, air emissions and water consumption were significant issues during the licensing process.

The site's initial preparation involved moving over 10 million cubic yards of soil and draining 4 billion gallons of water. Construction of the energy complex recycled the land for a beneficial use and promote habitat restoration.

The Hines Energy Complex is visited by several species of wildlife, including alligators, bobcats, turtles, and over 50 species of birds. The Hines site also contains a wildlife corridor, which creates a continuous connection between the Peace River and the Alafia River.

PEF arranged for the City of Bartow to provide treated effluent for cooling pond make-up. The complex's cooling pond initially covered 722 acres with an eventual expansion to 2,500 acres.

The Hines Energy Complex is designed and permitted to be a zero discharge site. This means that there will be no discharges to surface waters either from the power plant facilities or from storm water runoff. Based on this design, storm water runoff from the site can be used as cooling pond make-up, minimizing groundwater withdrawals.

The Florida Department of Environmental Protection air rules currently list all of Polk County as attainment for ambient air quality standards. The environmental impact on the site will be

minimized by PEF's close coordination with regulatory agencies to ensure compliance with all applicable environmental regulations.

As future generation units are added, the remaining network of on-site clay settling ponds will be converted to cooling ponds and combustion waste storage areas to support power plant operations. Given the disturbed nature of the property, considerable development has been required in order to make it usable for electric utility application. An industrial rail network and an adequate road system service the site.

The first combined cycle unit at this site, with a capacity of 482 MW summer, began commercial operation in April 1999. The transmission improvements associated with this first unit were the rebuilding of the 230/115 kV double circuit Barcola to Ft. Meade line by increasing the conductor sizes and converting the line to double circuit 230 kV operation.

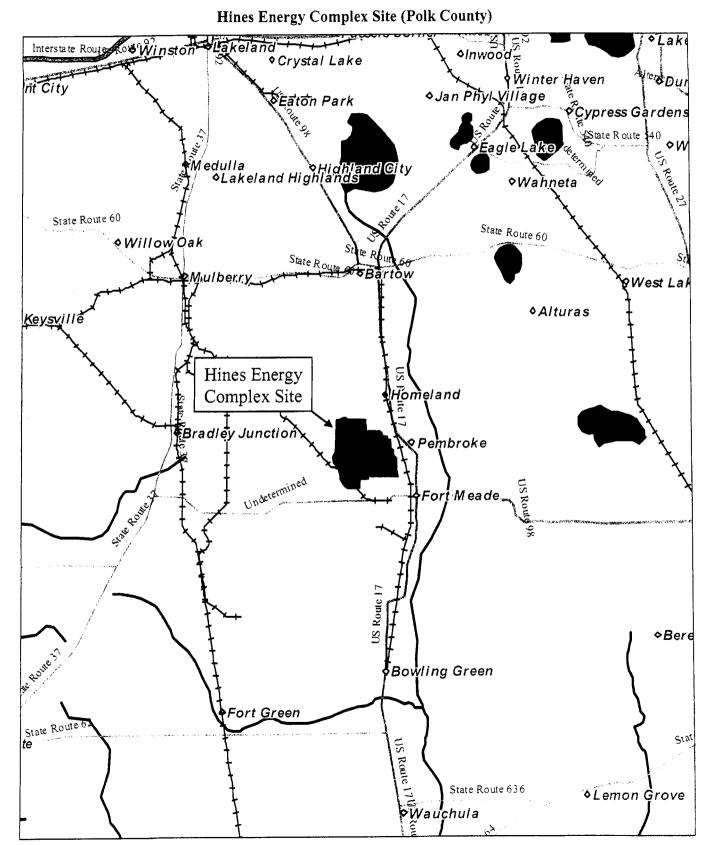
The second combined cycle unit at this site entered commercial operation in December 2003 with a seasonal capacity rating of 516 MW summer. The transmission improvement associated with the second combined cycle unit at this site involved the addition of a 230 kV circuit from the Hines Energy Complex to Barcola.

The third combined cycle unit at this site entered commercial operation in November 2005 with a seasonal capacity rating of 501 MW summer, and required no transmission upgrades.

The fourth HEC combined cycle unit is currently under construction. This unit has a commercial operation date of December 2007 with a seasonal capacity rating of 461 MW summer. The transmission improvements associated with the fourth combined cycle unit at this site involved the addition of a 230 kV circuit from the Hines Energy Complex to West Lake-Wales and associated substation expansion and breaker replacements.

The HEC is also a potential site for a combined cycle unit required in 2011.





## **INTERCESSION CITY SITE**

Intercession City was chosen as a potential site for installation of peaking combustion turbine units.

The Intercession City site (Figure 4.2) consists of 162 acres in Osceola County, two miles west of Intercession City. The site is immediately west of Reedy Creek and the adjacent Reedy Creek Swamp. The site is adjacent to a secondary effluent pipeline from a municipal wastewater treatment plant, an oil pipeline, and natural gas supply from the Florida Gas Transmission (FGT) and Gulfstream pipelines.

The Florida Department of Environmental Protection air rules currently list all of Osceola County as attainment for ambient air quality standards. The environmental impact on the site will be minimized by PEF's close coordination with regulatory agencies to ensure compliance with all applicable environmental regulations.

Transmission modifications will be required to accommodate additional combustion turbine peaking units at this site.

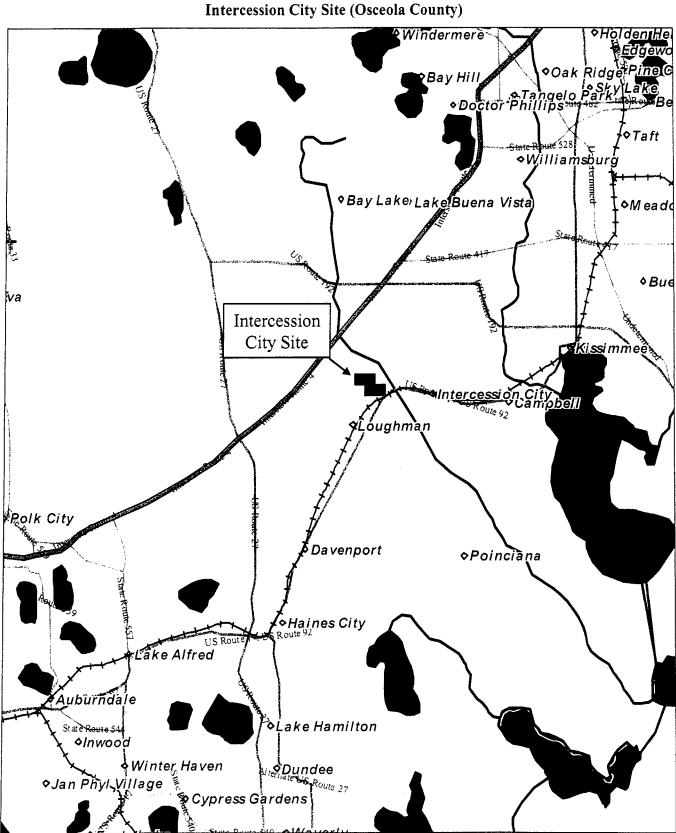


FIGURE 4.2 Intercession City Site (Osceola County)

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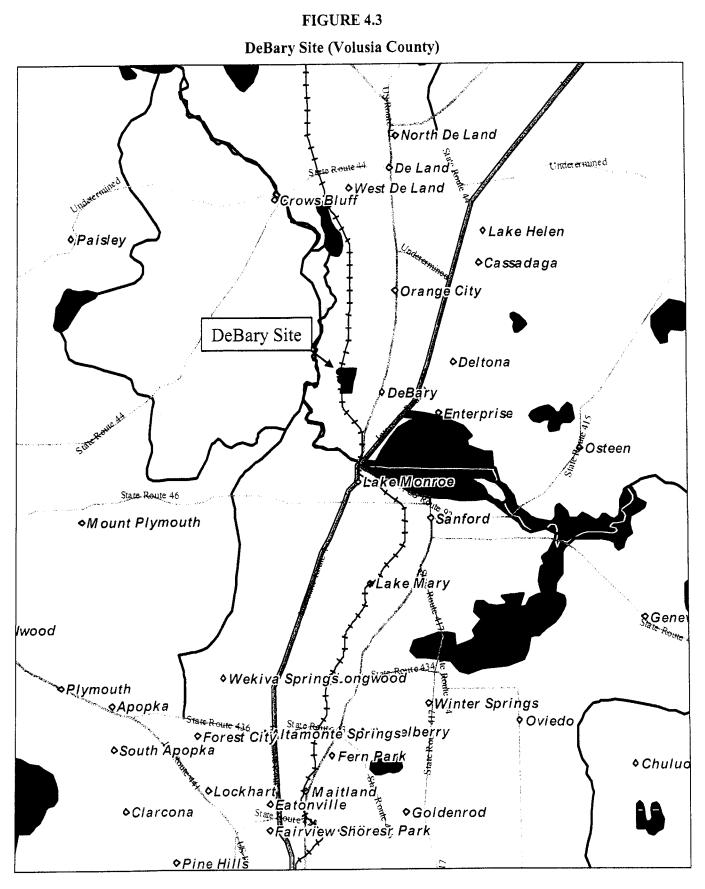
## DEBARY SITE

DeBary was chosen as a potential site for installation of peaking combustion turbine units.

The DeBary site (Figure 4.3) consists of 2,210 acres in Volusia County, immediately west of the town of DeBary. The site is bordered on the west by the St. Johns River and on the north by Blue Springs State Park. This site is adjacent to an oil pipeline and natural gas supply from the Florida Gas Transmission (FGT) pipeline.

The Florida Department of Environmental Protection air rules currently list all of Volusia County as attainment for ambient air quality standards. The environmental impact on the site will be minimized by PEF's close coordination with regulatory agencies to ensure compliance with all applicable environmental regulations.

Transmission modifications will be required to accommodate additional combustion turbine peaking units at this site.



#### ANCLOTE SITE

Anclote was chosen as a potential site for installation of peaking combustion turbine units.

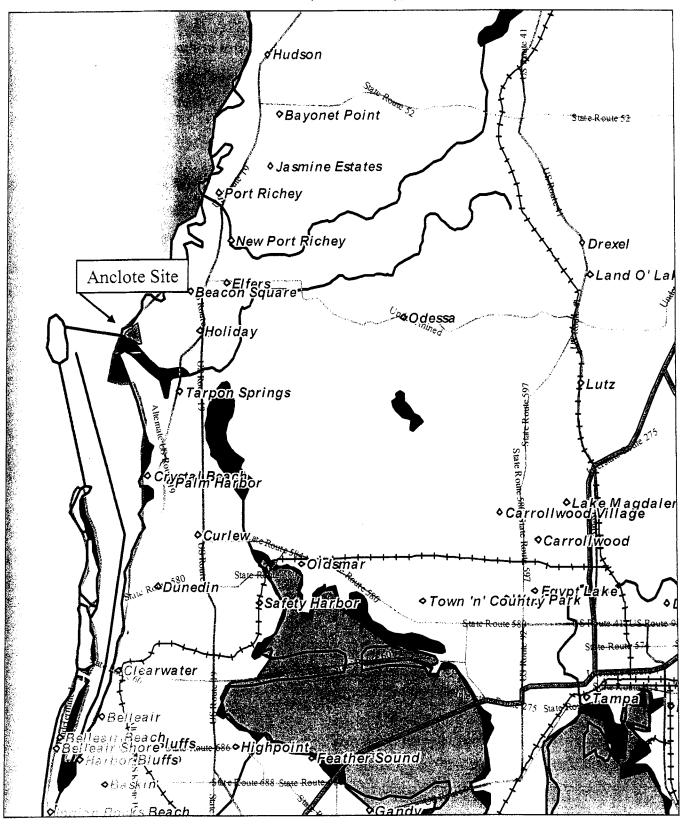
The Anclote site (Figure 4.4) consists of approximately 400 acres in Pasco County. The site is located in Holiday Florida at the mouth of the Anclote River. The site receives make-up water from the city of Tarpon Springs, fuel oil through a pipeline from the Bartow plant, and natural gas supply from the Florida Gas Transmission (FGT) pipeline.

The Florida Department of Environmental Protection air rules currently list all of Pasco County as attainment for ambient air quality standards. The environmental impact on the site will be minimized by PEF's close coordination with regulatory agencies to ensure compliance with all applicable environmental regulations.

Transmission modifications will be required to accommodate additional combustion turbine peaking units at this site.



Anclote (Pasco County)



## BARTOW SITE

PEF has chosen to repower its existing Bartow Plant with combined cycle technology, which is scheduled for commercial operation in June 2009.

The Bartow site (Figure 4.5) consists of 1,348 acres in Pinellas County, on the west shore of Tampa Bay. The site is on Weedon Island, north of downtown St. Petersburg. The site is adjacent to a barge fuel oil off-loading facility, a natural gas supply from the Florida Gas Transmission (FGT) pipeline, and a proposed Gulfstream natural gas pipeline.

The Florida Department of Environmental Protection air rules currently list all of Pinellas County as attainment for ambient air quality standards. The environmental impact on the site will be minimized by PEF's close coordination with regulatory agencies to ensure compliance with all applicable environmental regulations.

Transmission modifications will be required to accommodate the repowering of Bartow steam units.

FIGURE 4.5 Bartow Site (Pinellas County)

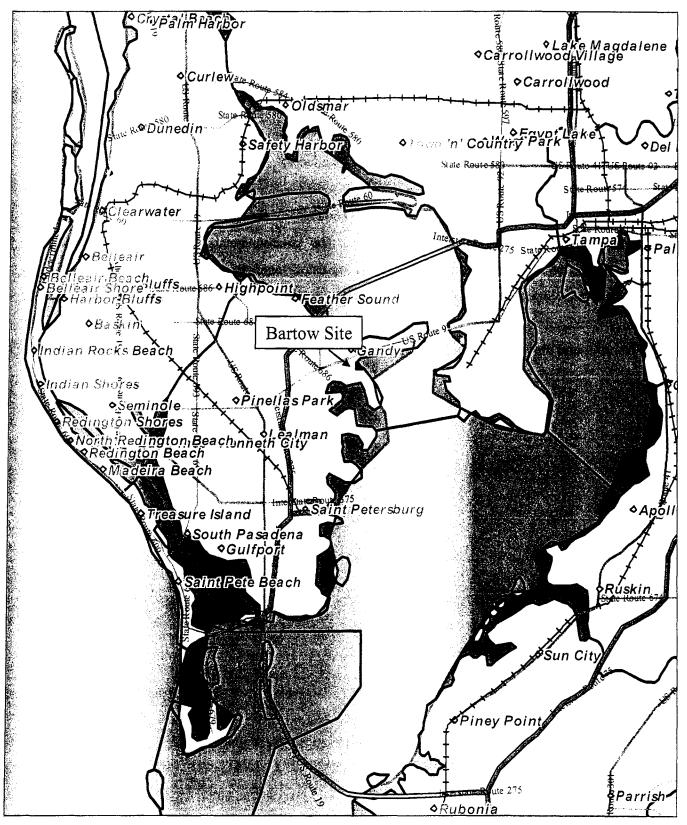


EXHIBIT NO.

DOCKET NO: 070052-EI

WITNESS: VARIOUS

PARTY: PROGRESS ENERGY FLORIDA, INC.

DESCRIPTION: STAFF'S EXHIBIT

DOCUMENTS:

Progress Energy Florida's 2007 Ten Year Site Plan.

PROFFERED BY: STAFF

FLORIDA PUBLIC SERVICE COMMISSION DOCKET NO.<u>070052-EI</u> EXHIBIT <u>27</u> COMPANY <u>PEF</u> WITNESS <u>2007</u> ID-YF. SitePlan DATE <u>08</u> 07 + 08/07

# Progress Energy Florida Ten-Year Site Plan

April 2007

# 2007-2016

# Submitted to: Florida Public Service Commission



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### **CODE IDENTIFICATION SHEET**

# **Generating Unit Type**

ST - Steam Turbine - Non-Nuclear

NP - Steam Power - Nuclear

GT - Gas Turbine

CT - Combustion Turbine

CC - Combined cycle

SPP - Small Power Producer

COG - Cogeneration Facility

## Fuel Type

NUC - Nuclear (Uranium) NG - Natural Gas RFO - No. 6 Residual Fuel Oil DFO - No. 2 Distillate Fuel Oil BIT - Bituminous Coal MSW - Municipal Solid Waste WH - Waste Heat BIO - Biomass

### **Fuel Transportation**

WA - Water TK - Truck RR - Railroad PL - Pipeline UN - Unknown

## **Future Generating Unit Status**

A - Generating unit capability increased

FC - Existing generator planned for conversion to another fuel or energy source

P - Planned for installation but not authorized; not under construction

RP - Proposed for repowering or life extension

RT - Existing generator scheduled for retirement

T - Regulatory approval received but not under construction

U - Under construction, less than or equal to 50% complete

V - Under construction, more than 50% complete

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### **INTRODUCTION**

Section 186.801 of the Florida Statutes requires electric generating utilities to submit a Ten-Year Site Plan (TYSP) to the Florida Public Service Commission (FPSC). The TYSP includes historical and projected data pertaining to the utility's load and resource needs as well as a review of those needs. It is compiled in accordance with FPSC Rules 25-22.070 through 22.072, Florida Administrative Code.

Progress Energy Florida's (PEF's) TYSP is based on projections of long-term planning requirements that are dynamic in nature and subject to change. These planning documents should be used for general guidance concerning PEF's planning assumptions and projections, and should not be taken as an assurance that particular events discussed in the TYSP will materialize or that particular plans will be implemented. Information and projections pertinent to periods further out in time are inherently subject to greater uncertainty.

The TYSP document contains four chapters as described below:

# <u>CHAPTER 1</u> DESCRIPTION OF EXISTING FACILITIES

### CHAPTER 2

FORECAST OF ELECTRICAL POWER DEMAND AND ENERGY CONSUMPTION

### CHAPTER 3

FORECAST OF FACILITIES REQUIREMENTS

# CHAPTER 4

ENVIRONMENTAL AND LAND USE INFORMATION

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.

# <u>CHAPTER 1</u>

# DESCRIPTION OF EXISTING FACILITIES



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# <u>CHAPTER 1</u> DESCRIPTION OF EXISTING FACILITIES

# **EXISTING FACILITIES OVERVIEW**

# OWNERSHIP

PEF is a wholly owned subsidiary of Progress Energy, Inc. (Progress Energy). Congress enacted legislation in 2005 repealing the Public Utilities Holding Company Act of 1935 (PUCHA) effective February 8, 2006. Subsequent to that date, Progress Energy is no longer subject to regulation by the Securities and Exchange Commission as a public utility holding company. Progress Energy is the parent company of PEF and certain other subsidiaries.

### **AREA OF SERVICE**

PEF provided electric service during 2006 to an average of 1.6 million customers in Florida. Its service area covers approximately 20,000 square miles and includes the densely populated areas around Orlando, as well as the cities of St. Petersburg and Clearwater. PEF is interconnected with 22 municipal and 9 rural electric cooperative systems. PEF is subject to the rules and regulations of the Federal Energy Regulatory Commission (FERC) and the FPSC. PEF's Service Area is shown in Figure 1.1.

# TRANSMISSION/DISTRIBUTION

The Company is part of a nationwide interconnected power network that enables power to be exchanged between utilities. The PEF transmission system includes approximately 5,000 circuit miles of transmission lines. The distribution system includes approximately 18,000 circuit miles of overhead distribution conductors and approximately 13,000 miles of underground cable. A map of the Electric System can be found in Figure 1.2.

# ENERGY MANAGEMENT and ENERGY EFFICIENCY

PEF customers participating in the company's residential Energy Management program help to manage future growth and costs. Approximately 389,000 customers participated in the Energy Management program at the end of 2006, contributing about 755,000 kW of winter peak-shaving capacity for use during high load periods.

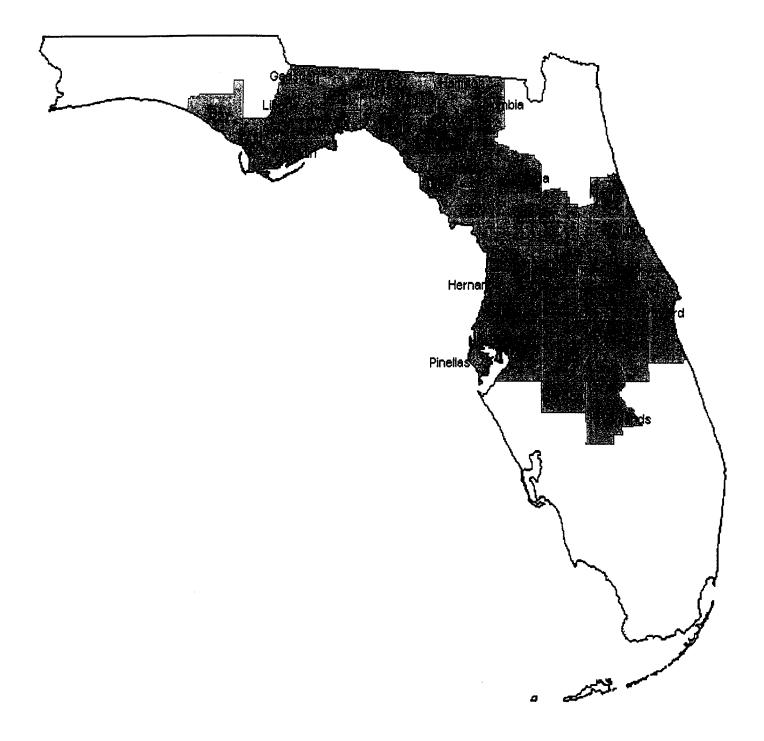
PEF's DSM Plan currently consists of seven residential programs, eight commercial and industrial programs, and one research and development program. This includes the 39 additional DSM measures and 2 new residential programs approved by the FPSC on January 5, 2007. (Docket 060647: Consummating Order PSC-07-0017-CO-EG making Order PSC-0601018-TRG-EG effective and final). Megawatt contributions to the TYSP have increased as a result of these changes to conservation, standby, and residential load management programs.

# TOTAL CAPACITY RESOURCE

As of December 31, 2006, PEF had total summer capacity resources of approximately 10,752 MW consisting of installed capacity of 8,844 MW (excluding Crystal River 3 joint ownership) and 1,908 MW of firm purchased power. Additional information on PEF's existing generating resources is shown on Schedule 1 and Table 3.1.

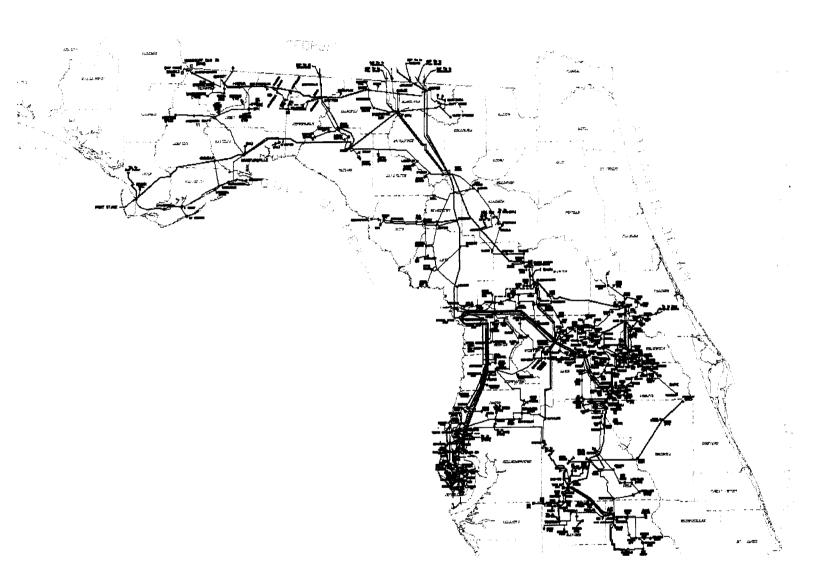
# FIGURE 1.1 PROGRESS ENERGY FLORIDA

# Service Area Map



# FIGURE 1.2 PROGRESS ENERGY FLORIDA

Electric System Map



SCHEDULE 1 EXISTING GENERATING FACILITIES AS OF DECEMBER 31, 2006

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10) COM'L IN-	(11) EXPECTED	(12) GEN. MAX.	(13) <u>NET CA</u> F	(14) PABILITY
	UNIT	LOCATION	UNIT	<u>FI</u>	J <u>EL</u>	FUEL TR	ANSPORT	ALT. FUEL	SERVICE	RETIREMENT	NAMEPLATE	SUMMER	WINTER
PLANT NAME	<u>NO.</u>	(COUNTY)	TYPE	PRL	ALT.	PRI	ALT.	DAYS USE	MO./YEAR	MO./YEAR	KW	MW	MW
STEAM													
ANCLOTE	1	PASCO	ST	RFO	NG	PL	PL		10/74		556,200	498	522
ANCLOTE	2	PASCO	ST	RFO	NG	PL	PL		10/78		556,200	507	526
BARTOW	1	PINELLAS	ST	RFO		WA			09/58		127,500	121	125
BARTOW	2	PINELLAS	ST	RFO		WA			08/61		127,500	119	124
BARTOW	3	PINELLAS	ST	RFO	NG	WA	PL.		07/63		239,360	204	215
CRYSTAL RIVER	1	CITRUS	ST	BIT		RR	WA		10/66		440,550	379	386
CRYSTAL RIVER	2	CITRUS	ST	BIT		RR	WA		11/69		523,800	491	496
CRYSTAL RIVER	3 *	CITRUS	ST	NUC		TK			03/77		890,460	769	788
CRYSTAL RIVER	4	CITRUS	ST	BIT		WA	RR		12/82		739,260	722	734
CRYSTAL RIVER	5	CITRUS	ST	BIT		WA	RR		10/84		739,260	721	734
SUWANNEE RIVER	1	SUWANNEE	ST	RFO	NG	TK/RR	PL		11/53		34,500	30	33
SUWANNEE RIVER	2	SUWANNEE	ST	RFO	NG	TK/RR	PL		11/54		37,500	31	31
SUWANNEE RIVER	3	SUWANNEE	ST	RFO	NG	TK/RR	PL.		10/56		75,000	80	<u>82</u>
												4,672	4,796
COMBINED-CYCLE													
HINES ENERGY COMPLEX	1	POLK	сс	NG	DFO	PL	TK	2***	04/99		546,500	463	528
HINES ENERGY COMPLEX	2	POLK	сс	NG	DFO	PL.	ΤK		12/03		548,250	490	562
HINES ENERGY COMPLEX	3	POLK	сс	NG	DFO	PL	TK		11/05		561,000	503	570
TIGER BAY	1	POLK	сс	NG		PL			08/97		278,100	203	225
												1,659	1,885
COMBUSTION TURBINE													
AVON PARK	P1	HIGHLANDS	GT	NG	DFO	PL	ТΚ	3***	12/68		33,790	25	34
AVON PARK	P2	HIGHLANDS	GT	DFO		TK			12/68		33,790	25	36
BARTOW	P1, P3	PINELLAS	GT	DFO		WA			05/72, 06/72		111,400	86	112
BARTOW	P2	PINELLAS	GT	NG	DFO	PL.	WA	8	06/72		55,700	44	56
BARTOW	P4	PINELLAS	GT	NG	DFO	PL	WA	8	06/72		55,700	46	58
BAYBORO	P1-P4	PINELLAS	GT	DFO		WA			04/73		226,800	177	232
DEBARY	P1-P6	VOLUSIA	GT	DFO		TK.			12/75-04/76		401,220	311	393
DEBARY	P7-P9	VOLUSIA	GT	NG	DFO	PL	TK	8	10/92		345,000	249	287
DEBARY	P10	VOLUSIA	GT	DFO		тк			10/92		115,000	83	99
HIGGINS	P1-P2	PINELLAS	GT	NG	DFO	PL	TK		03/69, 04/69		67,580	53	68
HIGGINS	P3-P4	PINELLAS	GT	NG	DFO	PL	TK	1	12/70, 01/71		85,850	57	65
INTERCESSION CITY	P1-P6	OSCEOLA	GT	DFO		PL,TK			05/74		340,200	282	369
INTERCESSION CITY	P7-P10	OSCEOLA	GT	NG	DFO	PL	PL,TK	5	10/93		460,000	332	376
INTERCESSION CITY	P11 **	OSCEOLA	GT	DFO		PL,TK			01/97		165,000	143	161
INTERCESSION CITY	P12-P14	OSCEOLA	GT	NG	DFO	PL	PL,TK	5	12/00		345,000	235	278
RIO PINAR	P1	ORANGE	GT	DFO		TK			11/70		19,290	13	16
SUWANNEE RIVER	P1, P3	SUWANNEE	GT	NG	DFO	PL	ТК	9****	10/80, 11/80		122,400	106	133
SUWANNEE RIVER	P2	SUWANNEE	GT	DFO		TK			10/80		61,200	51	66
TURNER	P1-P2	VOLUSIA	GT	DFO		TK			10/70		38,580	22	32
TURNER	P3	VOLUSIA	GT	DFO		TK			08/74		71,200	64	85
TURNER	P4	VOLUSIA	GT	DFO		TK			08/74		71,200	64	84
UNIV. OF FLA.	Pi	ALACHUA	GT	NG		PL			01/94		43,000	45	47
	- •											2,513	3,087
* REPRESENTS APPROXIMATELY 91.8%	PEFOWNERS	HIP OF UNIT										_,	-,
										9.768			
					•								

\*\*\* FOR ENTIRE PLANT

\*\*\*\* P1 REQUIRES A 3-4 DAY OUTAGE IN ORDER TO SWITCH BETWEEN NG & DFO

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# CHAPTER 2

FORECAST OF ELECTRIC POWER DEMAND AND ENERGY CONSUMPTION



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# CHAPTER 2 FORECAST OF ELECTRIC POWER DEMAND AND ENERGY CONSUMPTION

### **OVERVIEW**

The following Schedules 2, 3 and 4 represent PEF's history and forecast of customers, energy sales (GWh), and peak demand (MW). High and low scenarios are also presented for sensitivity purposes.

The base case was developed using assumptions to predict a forecast with a 50/50 probability, or most likely scenario. The high and low scenarios, which have a 90/10 probability of occurrence or an 80 percent probability of an outcome falling between the high and low cases, employed a Monte Carlo simulation procedure that studied 1,000 possible outcomes of retail demand and energy.

PEF's customer growth is expected to average 1.8 percent between 2007 and 2016, less than the ten-year historical average of 2.4 percent. The ten-year historical growth rate falls to 2.1 percent when accounting for the creation of PEF's Seasonal Service Rate tariff, which artificially inflates customer growth figures. Slower population growth - based on the latest projection from the University of Florida's Bureau of Economic and Business Research – and economic conditions less favorable for the housing/construction industry (including, for example, higher interest rates, property insurance and property taxes) result in a lower base case customer projection when compared to the higher historical growth rate. This translates into lower projected energy and demand growth rates from historic rate levels.

Net energy for load (NEL), which had grown at an average of 3.2 percent between 1997 and 2006, is expected to increase by 2.6 percent per year from 2007-2016 in the base case, 2.7 percent in the high case and 2.2 percent in the low case. A lower contribution from the wholesale jurisdiction, which grew an average of 10.2 percent between 1997 and 2006, results in lower expected system growth going forward than the historic rate. Retail NEL, which grew at a

2.8 percent average rate historically, is expected to grow 2.5 percent over the next ten years. Wholesale NEL is expected to average 2.9 percent between 2007 and 2016.

Summer net firm demand is expected to grow an average of 2.1 percent per year during the next ten years. This compares to the 3.6 percent growth rate experienced throughout the last ten years. Again, lower contribution from the wholesale jurisdiction is expected going forward and a higher load management capability for the projected period. High and low summer growth rates for net firm demand are 2.3 percent and 1.8 percent per year, respectively. Winter net firm demand is projected to grow at 2.5 percent per year after having increased by 2.9 percent per year from 1997 to 2006. High and low winter net firm demand growth rates are 2.7 percent and 2.2 percent, respectively.

Summer net firm retail demand is expected to grow an average of 2.1 percent per year during the next ten years; this compares to the 3.6 percent average annual growth rate experienced throughout the last ten years. The historical growth percentage is driven by a period of declining load management capability while the projection period has a return to higher capability. High and low summer growth rates for net firm retail demand are 2.4 percent and 1.8 percent per year, respectively. Winter net firm retail demand is projected to grow at approximately 1.9 percent per year after having grown by 3.1 percent from 1997 to 2006. Again, higher load control capability is incorporated in the projection period. High and low winter net firm retail demand growth rates are 2.2 percent and 1.6 percent, respectively.

# **ENERGY CONSUMPTION AND DEMAND FORECAST SCHEDULES**

.

<u>SCHEDULE</u>	DESCRIPTION
2.1, 2.2 and 2.3	History and Forecast of Energy Consumption and Number of
	Customers by Customer Class
3.1.1, 3.1.2 and 3.1.3	History and Forecast of Base, High and Low Summer Peak
	Demand (MW)
3.2.1, 3.2.2 and 3.2.3	History and Forecast of Base, High, and Low Winter Peak
	Demand (MW)
3.3.1, 3.3.2 and 3.3.3	History and Forecast of Base, High and Low Annual Net Energy
	for Load (GWh)
4	Previous Year Actual and Two-Year Forecast of Peak Demand and
	Net Energy for Load by Month

### SCHEDULE 2.1 HISTORY AND FORECAST OF ENERGY CONSUMPTION AND NUMBER OF CUSTOMERS BY CUSTOMER CLASS

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
		RURAL		COMMERCIAL				
YEAR	PEF POPULATION	MEMBERS PER HOUSEHOLD	GWh	AVERAGE NO. OF CUSTOMERS	AVERAGE KWh CONSUMPTION PER CUSTOMER	GWh	AVERAGE NO. OF CUSTOMERS	AVERAGE KWh CONSUMPTION PER CUSTOMER
1997	2,878,315	2.480	15,080	1,160,611	12,993	9,257	132,504	69,862
1998	2,941,589	2.487	16,526	1,182,786	13,972	9,999	136,345	73,336
1 <b>999</b>	3,028,821	2.496	16,245	1,213,470	13,387	10,327	140,897	73,295
2000	3,026,469	2.452	17,116	1,234,286	13,867	10,813	143,475	75,365
2001	3,122,946	2.450	17,604	1,274,672	13,811	11,061	146,983	75,254
2002	3,191,315	2.452	18,754	1,301,515	14,409	11,420	150,577	75,842
2003	3,267,185	2.453	1 <b>9,429</b>	1,331,914	14,587	11,553	154,294	74,877
2004	3,348,917	2.454	19,347	1,364,677	14,177	11,734	158,780	73,901
2005	3,429,664	2.455	19,894	1,397,012	14,240	11,945	161,001	74,192
2006	3,512,066	2.453	20,021	1,431,743	13,984	11,975	162,774	73,568
2007	3,565,718	2.455	20,891	<b>1,452,43</b> 1	14,383	12,340	167,150	73,826
2008	3,629,609	2.450	21,457	1,481,473	14,484	12,674	170,889	74,165
2009	3,694,808	2.447	22,026	1,509,934	14,587	13,009	174,552	74,528
2010	3,762,611	2.446	22,605	1,538,271	14,695	13,361	178,195	74,980
2011	3,828,922	2.444	23,192	1,566,662	14,803	13,708	181,846	75,382
2012	3,895,566	2.442	23,792	1,595,236	14,914	14,056	185,520	75,765
2013	3,959,232	2.438	24,404	1,623,967	15,027	14,417	189,213	76,195
2014	4,025,804	2.436	25,027	1,652,629	15,144	14,796	192,896	76,705
2015	4,091,505	2.434	25,693	1,680,980	15,285	15,202	196,539	77,349
2016	4,155,712	2.432	26,363	1,708,763	15,428	15,622	200,111	78,067

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### SCHEDULE 2.2 HISTORY AND FORECAST OF ENERGY CONSUMPTION AND NUMBER OF CUSTOMERS BY CUSTOMER CLASS

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
		INDUSTRIAL					
YEAR	GWh	AVERAGE NO. OF CUSTOMERS	AVERAGE KWh CONSUMPTION PER CUSTOMER	RAILROADS AND RAILWAYS GWh	STREET & HIGHWAY LIGHTING GWh	OTHER SALES TO PUBLIC AUTHORITIES GWh	TOTAL SALES TO ULTIMATE CONSUMERS GWb
1997	4,188	2,830	1,479,859	0	27	2,299	30,851
1998	4,375	2,707	1,616,180	0	27	2,459	33,386
1999	4,334	2,629	1,648,536	0	27	2,509	33,442
2000	4,249	2,535	1,676,134	0	28	2,626	34,832
2001	3,872	2,551	1,517,836	0	28	2,698	35,263
2002	3,835	2,535	1,512,821	0	28	2,822	36,859
2003	4,001	2,643	1,513,810	0	29	2,946	37,958
2004	4,069	2,733	1,488,840	0	28	3,016	38,194
2005	4,140	2,703	1,531,632	0	27	3,171	39,177
2006	4,160	2,697	1,542,455	0	27	3,249	39,432
2007	4,155	2,701	1,538,319	0	28	3,353	40,767
2008	4,393	2,701	1,626,435	0	28	3,457	42,009
2009	4,423	2,701	1,637,542	0	28	3,570	43,056
2010	4,451	2,701	1,647,908	0	28	3,682	44,127
2011	4,518	2,701	1,672,714	0	28	3,798	45,244
2012	4,544	2,701	1,682,340	0	28	3,916	46,336
2013	4,571	2,701	1,692,336	0	28	4,038	47,458
2014	4,599	2,701	1,702,703	0	28	4,164	48,614
2015	4,587	2,701	1,698,260	0	28	4,293	49,803
2016	4,587	2,701	1,698,260	0	28	4,427	51,027

2-5

# SCHEDULE 2.3 HISTORY AND FORECAST OF ENERGY CONSUMPTION AND NUMBER OF CUSTOMERS BY CUSTOMER CLASS

(1)	(2)	(3)	(4)	(5)	(6)
	SALES FOR	UTILITY USE	NET ENERGY	OTHER	TOTAL
	RESALE	& LOSSES	FOR LOAD	CUSTOMERS	NO. OF
YEAR	GWh	GWh	GWh	(AVERAGE NO.)	CUSTOMERS
1997	1,758	1,996	34,605	18,562	1,314,507
1998	2,340	2,037	37,763	19,013	1,340,851
1999	3,267	2,451	39,160	19,601	1,376,597
2000	3,732	2,678	41,242	20,003	1,400,299
2001	3,839	1,831	40,933	20,752	1,444,958
2002	3,173	2,535	42,567	21,156	1,475,783
2003	3,359	2,594	43,911	21,665	1,510,516
2004	4,301	2,773	45,268	22,437	1,548,627
2005	5,195	2,506	46,878	22,701	1,583,417
2006	4,220	2,389	46,041	23,182	1,620,396
2007	4,524	2,905	48,194	23,687	1,645,969
2008	4,501	2,958	49,468	24,280	1,679,343
2009	4,527	3,026	50,609	24,877	1,712,064
2010	5,238	3,151	52,516	25,474	1,744,641
2011	5,363	3,169	53,776	26,071	1,777,280
2012	5,437	3,244	55,017	26,669	1,810,126
2013	5,542	3,321	56,321	27,266	1,843,147
2014	5,673	3,445	57,732	27,864	1,876,090
2015	5,795	3,476	59,074	28,460	1,908,680
2016	5,873	3,560	60,460	29,058	1,940,633

#### SCHEDULE 3.1.1 HISTORY AND FORECAST OF SUMMER PEAK DEMAND (MW) BASE CASE

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(OTH)	(10)
YEAR	TOTAL	WHOLESALE	RETAIL	INTERRUPTIBLE	RESIDENTIAL LOAD MANAGEMENT	RESIDENTIAL CONSERVATION	COMM. / IND. LOAD MANAGEMENT	COMM. / IND. CONSERVATION	OTHER DEMAND REDUCTIONS	NET FIRM DEMAND
1997	7,786	874	6.912	288	555	78	41	124	170	6,531
1998	8.367	943	7,424	291	438	97	42	134	182	7,183
1999	9.039	1,326	7,713	292	505	113	45	145	183	7,756
2000	8.902	1.319	7,583	277	455	127	48	146	75	7,774
2001	8,832	1,117	7,715	283	414	139	48	147	75	7,726
2002	9,412	1,203	8,209	305	390	153	43	150	75	8,296
2003	8,877	887	7,990	300	393	172	44	154	75	7,738
2004	9,578	1,071	8,507	531	355	188	39	155	110	8,200
2005	10,345	1,118	9,227	448	343	206	38	158	110	9,041
2006	10,186	1,257	8,929	329	319	226	37	161	110	9,003
2007	10,658	1,321	9,337	449	319	243	43	168	110	9,327
2008	10,927	1,337	9,590	473	332	259	52	177	110	9,525
2009	11,010	1,192	9,818	474	351	275	61	185	110	9,553
2010	11,318	1,269	10,049	479	372	292	70	194	110	9,801
2011	11,569	1,287	10,282	484	393	308	80	203	110	9,992
2012	11,807	1,296	10,511	485	414	325	89	211	110	10,173
2013	12,062	1,320	10,742	486	427	342	98	220	110	10,379
2014	12,437	1,469	10,968	483	438	360	107	229	110	10,711
2015	12,671	1,483	11,188	478	441	367	110	232	110	10,932
2016	12,906	1,499	11,407	477	441	367	110	232	110	11,169

#### Historical Values (1997 - 2006):

Col. (2) = recorded peak + implemented load control + residential and commercial/industrial conservation and customer-owned self-service cogeneration.

Cols. (5) - (9) = Represent total cumulative capabilities at peak. Col. (8) includes commercial load management and standby generation.

Col. (OTH) =Customer-owned self-service cogeneration.

Col. (10) = (2) - (5) - (6) - (7) - (8) - (9) - (0TH).

Projected Values (2007 - 2016):

Cols. (2) - (4) = forecasted peak without load control, conservation, and customer-owned self-service cogeneration.

Cols. (5) - (9) = cumulative conservation and load control capabilities at peak. Col. (8) includes commercial load management and standby generation.

Col. (OTH) = customer-owned self-service cogeneration.

Col. (10) = (2) - (5) - (6) - (7) - (8) - (9) - (OTH).

#### SCHEDULE 3.1.2 HISTORY AND FORECAST OF SUMMER PEAK DEMAND (MW) HIGH LOAD FORECAST

(i)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(OTH)	(10)
YEAR	TOTAL	WHOLESALE	RETAIL	INTERRUPTIBLE	RESIDENTIAL LOAD MANAGEMENT	RESIDENTIAL CONSERVATION	COMM. / IND. LOAD MANAGEMENT	COMM. / IND. CONSERVATION	OTHER DEMAND REDUCTIONS	NET FIRM DEMAND
1997	7,786	874	6,912	288	555	78	41	124	170	6,531
1998	8,367	943	7,424	291	438	97	42	134	182	7,183
1999	9,039	1.326	7,713	292	505	113	45	145	183	7,756
2000	8,902	1,319	7,583	277	455	127	48	146	75	7,774
2001	8,832	1,117	7,715	283	414	139	48	147	75	7,726
2002	9,412	1,203	8,209	305	390	153	43	150	75	8,296
2003	8,877	887	7,990	300	393	172	44	154	75	7,738
2004	9,578	1,071	8,507	531	355	188	39	155	110	8,200
2005	10,345	1,118	9,227	448	343	206	38	158	110	9,041
2006	10,186	1,257	8,929	329	319	226	37	161	110	9,003
2007	10,801	1,321	9,480	449	319	243	43	168	110	9,470
2008	11,086	1,337	9,748	473	332	259	52	177	110	9,683
2009	11,185	1,192	9,993	474	351	275	61	185	110	9,728
2010	11,513	1,269	10,244	479	372	292	70	194	110	9,996
2011	11,814	1,287	10,527	484	393	308	80	203	110	10,237
2012	12,067	1,296	10,771	485	414	325	89	211	110	10,433
2013	12,369	1,320	11,049	486	427	342	98	220	110	10,686
2014	12,773	1,469	11,304	483	438	360	107	229	110	11,047
2015	13,065	1,483	11,582	478	441	367	110	232	110	11,327
2016	13,338	1,499	11,839	477	441	367	110	232	110	11,601

Historical Values (1997 - 2006):

Col. (2) = recorded peak + implemented load control + residential and commercial/industrial conservation and customer-owned self-service cogeneration.

Cols. (5) - (9) = Represent total cumulative capabilities at peak. Col. (8) includes commercial load management and standby generation.

Col. (OTH) =Customer-owned self-service cogeneration.

Col.  $(10) = (2) \cdot (5) \cdot (6) - (7) \cdot (8) - (9) \cdot (OTH).$ 

Projected Values (2007 - 2016):

Cols. (2) - (4) = forecasted peak without load control, conservation, and customer-owned self-service cogeneration.

Cols. (5) - (9) = cumulative conservation and load control capabilities at peak. Col. (8) includes commercial load management and standby generation.

Col. (OTH) = customer-owned self-service cogeneration.

Col. (10) = (2) - (5) - (6) - (7) - (8) - (9) - (OTH).

#### SCHEDULE 3.1.3 HISTORY AND FORECAST OF SUMMER PEAK DEMAND (MW) LOW LOAD FORECAST

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(OTH)	(10)
					RESIDENTIAL LOAD	RESIDENTIAL	COMM. / IND. LOAD	COMM. / IND.	OTHER DEMAND	NET FIRM
YEAR	TOTAL	WHOLESALE	RETAIL	INTERRUPTIBLE	MANAGEMENT	CONSERVATION	MANAGEMENT	CONSERVATION	REDUCTIONS	DEMAND
1997	7.786	874	6,912	288	555	78	41	124	170	6.531
1998	8,367	943	7,424	200	438	97	42	134	182	7,183
1999	9,039	1,326	7,713	292	505	113	45	145	183	7,756
2000	9,039 8,902	1,328	7,583	277	455	127	49	145	75	7,774
2000	8,832	1,117	7,715	283	414	139	48	147	75	7,726
2001	9,412	1,203	8,209	305	390	153	43	150	75	8,296
2002	8,877	887	7,990	300	393	172	44	154	75	7,738
2003	9,578	1.071	8,507	531	355	188	39	155	110	8,200
2004	10,345	1,118	9,227	448	343	206	38	158	110	9.041
2003	10,186	1,118	8,929	329	319	226	37	161	110	9,003
	10 (24	1 221	0 201	449	319	243	43	168	110	9,193
2007	10,524	1,321	9,203	449	319	243	52	100	110	9,373
2008	10,776 10,849	1,337 1,192	9,438 9,657	473	352	239	61	185	110	9,392
2009 2010	10,849	1,192	9,853	474	372	292	70	194	110	9,605
2010	11,350	1,269	10.063	484	393	308	80	203	110	9,773
	11,550	1,287	10,063	485	414	325	89	211	110	9,914
2012		•		485	427	342	98	220	110	10,095
2013	11,778	1,320	10,458	483	427	342	107	229	110	10,380
2014	12,106	1,469	10,637	483	438 441	367	110	232	110	10,567
2015 2016	12,305 12,513	1,483 1,499	10,822 11,014	478	441 441	367	110	232	110	10,367
2016	14,313	1,499	11,014	•//	441	507	110	<del>ه</del> لونک		10,770

#### Historical Values (1997 - 2006):

Col. (2) = recorded peak + implemented load control + residential and commercial/industrial conservation and customer-owned self-service cogeneration.

Cols. (5) - (9) = Represent total cumulative capabilities at peak. Col. (8) includes commercial load management and standby generation.

Col. (OTH) =Customer-owned self-service cogeneration.

Col. (10) = (2) - (5) - (6) - (7) - (8) - (9) - (OTH).

Projected Values (2007 - 2016):

Cols. (2) - (4) = forecasted peak without load control, conservation, and customer-owned self-service cogeneration.

Cols. (5) - (9) = cumulative conservation and load control capabilities at peak. Col. (8) includes commercial load management and standby generation.

Col. (OTH) = customer-owned self-service cogeneration.

Col.  $(10) = (2) \cdot (5) \cdot (6) \cdot (7) \cdot (8) \cdot (9) \cdot (OTH).$ 

#### SCHEDULE 3.2.1 HISTORY AND FORECAST OF WINTER PEAK DEMAND (MW) BASE CASE

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(OTH)	(10)
YEAR	TOTAL	WHOLESALE	RETAL	INTERRUPTIBLE	RESIDENTIAL LOAD MANAGEMENT	RESIDENTIAL CONSERVATION	COMM. / IND. LOAD MANAGEMENT	COMM. / IND. CONSERVATION	OTHER DEMAND REDUCTIONS	NET FIRM DEMAND
1996/97	8,486	1,235	7,251	290	917	133	16	98	190	6,842
1997/98	7,752	941	6,811	318	663	164	17	106	168	6,317
1998/99	10,473	1,741	8,732	305	874	196	18	110	187	8,783
1999/00	10,033	1,728	8,305	225	849	229	20	112	182	8,416
2000/01	11,443	1,984	9,459	255	826	254	23	113	187	9,785
2001/02	10,669	1,624	9,045	285	819	278	24	114	188	8,960
2002/03	11,548	1,538	10,010	271	793	313	27	117	198	9,828
2003/04	9,317	1,167	8,150	498	786	343	26	117	261	7,287
2004/05	10,824	1,600	9,224	575	777	371	26	117	282	8,676
2005/06	10,736	1,467	9,269	298	769	413	26	118	281	8,830
2006/07	11,728	1,711	10,017	366	760	454	27	120	296	9,705
2007/08	12,132	1,789	10,343	452	777	495	37	126	302	9,943
2008/09	12,302	1,727	10,575	453	793	538	47	133	305	10,034
2009/10	12,817	2,012	10,805	454	811	580	57	139	309	10,468
2010/11	13,126	2,082	11,044	464	829	623	67	146	313	10,685
2011/12	13,516	2,241	11,275	465	846	666	76	152	316	10,994
2012/13	13,885	2,377	11,508	466	864	710	86	158	320	11,280
2013/14	14,197	2,456	11,741	467	882	754	96	165	324	11,509
2014/15	14,513	2,548	11,965	461	899	798	105	171	327	11,751
2015/16	14,827	2,639	12,187	456	899	798	105	171	332	12,064
2016/17	15,139	2,729	12,410	457	899	798	105	171	336	12,372

Historical Values (1997 - 2006):

Col. (2) = recorded peak + implemented load control + residential and commercial/industrial conservation and customer-owned self-service cogeneration.

Cols. (5) - (9) = Represent total cumulative capabilities at peak. Col. (8) includes commercial load management and standby generation.

Col. (OTH) = Voltage reduction and customer-owned self-service cogeneration.

 $\mathsf{Col.}\;(10)=(2)\cdot(5)\cdot(6)\cdot(7)\cdot(8)\cdot(9)\cdot(\mathsf{OTH}).$ 

Projected Values (2007 - 2016):

Cols. (2) - (4) forecasted peak without load control and conservation.

Cois. (5) - (9) = Represent cumulative conservation and load control capabilities at peak. Col. (8) includes commercial load management and standby generation.

Col. (OTH) = Voltage reduction and customer-owned self-service cogeneration.

Col. (10) = (2) - (5) - (6) - (7) - (8) - (9) - (OTH).

#### SCHEDULE 3.2.2 HISTORY AND FORECAST OF WINTER PEAK DEMAND (MW) HIGH LOAD FORECAST

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(OTH)	(10)
YEAR	TOTAL	WHOLESALE	RETAIL	INTERRUPTIBLE	RESIDENTIAL LOAD MANAGEMENT	RESIDENTIAL CONSERVATION	COMM. / IND. LOAD MANAGEMENT	COMM. / IND. CONSERVATION	OTHER DEMAND REDUCTIONS	NET FIRM DEMAND
1996/97	8,486	1,235	7,251	290	917	133	16	98	190	6,842
1997/98	7,752	941	6,811	318	663	164	17	106	168	6,317
1998/99	10,473	1,741	8,732	305	874	196	18	110	187	8,783
1999/00	10,033	1,728	8,305	225	849	229	20	112	182	8,416
2000/01	11,443	1,984	9,459	255	826	254	23	113	187	9,785
2001/02	10,669	1,624	9,045	285	819	278	24	114	188	8,960
2002/03	11,548	1,538	10,010	271	793	313	27	117	198	9,828
2003/04	9,317	1,167	8,150	498	786	343	26	117	261	7,287
2004/05	10,824	1,600	9,224	575	777	371	26	117	282	8,676
2005/06	10,736	1,467	9,269	298	769	413	26	118	281	8,830
2006/07	11,880	1,711	10,169	366	760	454	27	120	296	9,857
2007/08	12,300	1,789	10,510	452	777	495	37	126	302	10,111
2008/09	12,487	1,727	10,761	453	793	538	47	133	305	10,219
2009/10	13,022	2,012	11,010	454	811	580	57	139	309	10,672
2010/11	13,383	2,082	11,302	464	829	623	67	146	313	10,943
2011/12	13,788	2,241	11,548	465	846	666	76	152	316	11,266
2012/13	14,207	2,377	11,831	466	864	710	86	158	320	11,603
2013/14	14,548	2,456	12,092	467	882	754	96	165	324	11,860
2014/15	14,923	2,548	12,376	461	899	798	105	171	327	12,161
2015/16	15,275	2,639	12,636	456	899	798	105	171	332	12,513
2016/17	15,643	2,729	12,915	457	899	798	105	171	336	12,876

Historical Values (1997 - 2006):

Col. (2) = recorded peak + implemented load control + residential and commercial/industrial conservation and customer-owned self-service cogeneration.

Cols. (5) - (9) = Represent total cumulative capabilities at peak. Col. (8) includes commercial load management and standby generation.

Col. (OTH) = Voltage reduction and customer-owned self-service cogeneration.

Col. (10) = (2) - (5) - (6) - (7) - (8) - (9) - (OTH).

Projected Values (2007 - 2016):

Cols. (2) - (4) forecasted peak without load control and conservation.

Cols. (5) - (9) = Represent cumulative conservation and load control capabilities at peak. Col. (8) includes commercial load management and standby generation.

Col. (OTH) = Voltage reduction and customer-owned self-service cogeneration.

Col. (10) = (2) - (5) - (6) - (7) - (8) - (9) - (OTH).

#### SCHEDULE 3.2.3 HISTORY AND FORECAST OF WINTER PEAK DEMAND (MW) LOW LOAD FORECAST

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(OTH)	(10)
YEAR	TOTAL	WHOLESALE	RETAIL	NTERRUPTIBLE	RESIDENTIAL LOAD MANAGEMENT	RESIDENTIAL CONSERVATION	COMM. / IND. LOAD MANAGEMENT	COMM. / IND. CONSERVATION	OTHER DEMAND REDUCTIONS	NET FIRM DEMAND
1996/97	8,486	1,235	7,251	290	917	133	16	98	190	6,842
1997/98	7,752	941	6,811	318	663	164	17	106	168	6,317
1998/99	10,473	1,741	8,732	305	874	196	18	110	187	8,783
1999/00	10,033	1,728	8,305	225	849	229	20	112	182	8,416
2000/01	11,443	1,984	9,459	255	826	254	23	113	187	9,785
2001/02	10,669	1,624	9,045	285	819	278	24	114	188	8,960
2002/03	11,548	1,538	10,010	271	793	313	27	117	198	9,828
2003/04	9,317	1,167	8,150	498	786	343	26	117	261	7,287
2004/05	10,824	1,600	9,224	575	777	371	26	117	282	8,676
2005/06	10,736	1,467	9,269	298	769	413	26	118	281	8,830
2006/07	11,586	1,711	9,875	366	760	454	27	120	296	9,563
2007/08	11,971	1,789	10,181	452	777	495	37	126	302	9,782
2008/09	12,132	1,727	10,406	453	793	538	47	133	305	9,864
2009/10	12,609	2,012	10,597	454	811	580	57	139	309	10,259
2010/11	12,894	2,082	10,813	464	829	623	67	146	313	10,454
2011/12	13,244	2,241	11,004	465	846	666	76	152	316	10,722
2012/13	13,588	2,377	11,212	466	864	710	86	158	320	10,984
2013/14	13,853	2,456	11,397	467	882	754	96	165	324	11,165
2014/15	14,134	2,548	11,587	461	899	798	105	171	327	11,372
2015/16	14,418	2,639	11,779	456	899	798	105	171	332	11,656
2016/17	14,687	2,729	11,959	457	899	798	105	171	336	11,920

Historical Values (1997 - 2006):

Col. (2) = recorded peak - implemented load control + residential and commercial/industrial conservation and customer-owned self-service cogeneration.

Cols. (5) - (9) = Represent total cumulative capabilities at peak. Col. (8) includes commercial load management and standby generation.

Col. (OTH) = Voltage reduction and customer-owned self-service cogeneration.

Col. (10) = (2) - (5) - (6) - (7) - (8) - (9) - (OTH).

Projected Values (2007 - 2016):

Cols. (2) - (4) forecasted peak without load control and conservation.

Cols. (5) - (9) = Represent cumulative conservation and load control capabilities at peak. Col. (8) includes commercial load management and standby generation.

Col. (OTH) = Voltage reduction and customer-owned self-service cogeneration.

 $Col. \ (10) = (2) \cdot (5) \cdot (6) \cdot (7) \cdot (8) \cdot (9) \cdot (OTH).$ 

### SCHEDULE 3.3.1 HISTORY AND FORECAST OF ANNUAL NET ENERGY FOR LOAD (GWh) BASE CASE

(1)	(2)	(3)	(4)	(OTH)	(5)	(6)	(7)	(8)	(9)
YEAR	TOTAL	RESIDENTIAL CONSERVATION	COMM. / IND. CONSERVATION	OTHER ENERGY REDUCTIONS*	RETAIL	WHOLESALE	UTILITY USE & LOSSES	NET ENERGY FOR LOAD	LOAD FACTOR (%) **
1 <b>9</b> 97	35,752	268	317	562	30,850	1,758	1,997	34,605	49.0
1998	38,949	289	333	564	33,387	2,340	2,036	37,763	53.9
1999	40,375	312	339	564	33,441	3,267	2,452	39,160	50.0
2000	42,486	334	345	565	34,832	3,732	2,678	41,242	50.5
2001	42,200	354	349	564	35,263	3,839	1,831	40,933	47.5
2002	43,860	377	352	564	36,859	3,173	2,535	42,567	50.0
2003	45,232	400	357	564	37,957	3,359	2,595	43,911	47.7
2004	46,835	427	360	780	38,193	4,301	2,774	45,268	56.5
2005	48,479	460	363	779	39,177	5,195	2,506	46,878	52.3
2006	47,680	495	365	779	39,432	4,220	2,389	46,041	52.1
2007	49,878	522	383	779	40,766	4,524	2,904	48,194	56.7
2008	51,201	552	401	780	42,009	4,501	2,958	49,468	56.6
2009	52,389	582	419	779	43,055	4,527	3,027	50,609	57.6
2010	54,344	612	437	779	44,127	5,238	3,151	52,516	57.3
2011	55,652	642	455	779	45,243	5,363	3,170	53,776	57.5
2012	56,942	672	473	780	46,337	5,437	3,243	55,017	57.0
2013	58,293	702	491	779	47,457	5,542	3,322	56,321	57.0
2014	59,752	732	509	779	48,614	5,673	3,445	57,732	57.3
2015	61,094	732	509	779	49,802	5,795	3,477	59,074	57.4
2016	62,481	732	509	780	51,027	5,873	3,560	60,460	57.2

 Column (OTH) includes Conservation Energy For Lighting and Public Authority Customers, Customer-Owned Self-service Cogeneration and Load Control Programs.

\*\* Load Factors for historical years are calculated using the actual winter peak demand except the 1998 and 2004 historical load factors which are based on the actual summer peak demand.

Load Factors for future years are calculated using the net firm winter peak demand (Schedule 3.2.1)

### SCHEDULE 3.3.2 HISTORY AND FORECAST OF ANNUAL NET ENERGY FOR LOAD (GWh) HIGH LOAD FORECAST

(1)	(2)	(3)	(4)	(OTH)	(5)	(6)	(7)	(8)	(9)
YEAR	TOTAL	RESIDENTIAL	COMM. / IND. CONSERVATION	OTHER ENERGY REDUCTIONS*	RETAIL.	WHOLESALE	UTILITY USE & LOSSES	NET ENERGY FOR LOAD	LOAD FACTOR (%) **
1997	35,752	268	317	562	30,850	1,758	1,997	34,605	49.0
1998	38,949	289	333	564	33,387	2,340	2,036	37,763	53.9
1999	40,375	312	339	564	33,441	3,267	2,452	39,160	50.0
2000	42,486	334	345	565	34,832	3,732	2,678	41,242	50.5
2001	42,200	354	349	564	35,263	3,839	1,831	40,933	47.5
2002	43,860	377	352	564	36,859	3,173	2,535	42,567	50.0
2003	45,232	400	357	564	37,957	3,359	2,595	43,911	47.7
2004	46,835	427	360	780	38,193	4,301	2,774	45,268	56.5
2005	48,479	460	363	779	39,177	5,195	2,506	46,878	52.3
2006	47,680	495	365	779	39,432	4,220	2,389	46,041	52.1
2007	51,005	522	383	779	41,429	4,524	3,368	49,321	57.1
2008	51,987	552	401	780	42,744	4,501	3,009	50,254	56.6
2009	53,260	582	419	779	43,869	4,527	3,084	51,480	57.5
2010	55,320	612	437	779	45,032	5,238	3,222	53,492	57.2
2011	56,877	642	455	779	46,389	5,363	3,249	55,001	57.4
2012	58,250	672	473	780	47,555	5,437	3,333	56,325	56.9
2013	59,848	702	491	779	48,911	5,542	3,423	57,876	56.9
2014	61,459	732	509	779	50,203	5,673	3,563	59,439	57.2
2015	63,097	732	509	779	51,675	5,795	3,607	61,077	57.3
2016	64,684	732	509	780	53,083	5,873	3,707	62,663	57.2

 Column (OTH) includes Conservation Energy For Lighting and Public Authority Customers, Customer-Owned Self-service Cogeneration and Load Control Programs.

Load Factors for historical years are calculated using the actual winter peak demand except the 1998 and 2004 historical load factors which are based on the actual summer peak demand.
 Load Factors for future years are calculated using the net firm winter peak demand (Schedule 3.2.2)

### SCHEDULE 3.3.3 HISTORY AND FORECAST OF ANNUAL NET ENERGY FOR LOAD (GWh) LOW LOAD FORECAST

(1)	(2)	(3)	(4)	(OTH)	(5)	(6)	(7)	(8)	(9)
				OTHER					LOAD
		RESIDENTIAL	COMM, / IND,	ENERGY			UTILITY USE	NET ENERGY	FACTOR
YEAR	TOTAL	CONSERVATION	CONSERVATION	REDUCTIONS*	RETAIL	WHOLESALE		FOR LOAD	(%) **
I LAK	101AL						<b>u</b> 2000020		(70)
1997	35,752	268	317	562	30,850	1,758	1,997	34,605	49.0
1998	38,949	289	333	564	33,387	2,340	2,036	37,763	53.9
1999	40,375	312	339	564	33,441	3,267	2,452	39,160	50.0
2000	42,486	334	345	565	34,832	3,732	2,678	41,242	50.5
2001	42,200	354	349	564	35,263	3,839	1,831	40,933	47.5
2002	43,860	377	352	564	36,859	3,173	2,535	42,567	50.0
2003	45,232	400	357	564	37,957	3,359	2,595	43,911	47.7
2004	46,835	427	360	780	38,193	4,301	2,774	45,268	56.5
2005	48,479	460	363	779	39,177	5,195	2,506	46,878	52.3
2006	47,680	495	365	779	39,432	4,220	2,389	46,041	52.1
2007	49,569	522	383	779	40,147	4,524	3,214	47,885	57.2
2008	50,448	552	401	780	41,304	4,501	2,910	48,715	56.7
2009	51,583	582	419	779	42,306	4,527	2,970	49,803	57.6
2010	53,358	612	437	779	43,207	5,238	3,085	51,530	57.3
2011	54,549	642	455	779	44,216	5,363	3,094	52,673	57.5
2012	55,637	672	473	780	45,117	5,437	3,158	53,712	57.0
2013	56,860	702	491	779	46,123	5,542	3,223	54,888	57.0
2014	58,077	732	509	779	47,049	5,673	3,335	56,057	57.3
2015	59,234	732	509	779	48,062	5,795	3,357	57,214	57.4
2016	60,468	732	509	780	49,147	5,873	3,427	58,447	57.2

\* Column (OTH) includes Conservation Energy For Lighting and Public Authority Customers, Customer-Owned Self-service Cogeneration and Load Control Programs.

\*\* Load Factors for historical years are calculated using the actual winter peak demand except the 1998 and 2004 historical load factors which are based on the actual summer peak demand.

Load Factors for future years are calculated using the net firm winter peak demand (Schedule 3.2.3)

### SCHEDULE 4

# PREVIOUS YEAR ACTUAL AND TWO-YEAR FORECAST OF PEAK DEMAND AND NET ENERGY FOR LOAD BY MONTH

(1)	(2)	(3)	(4)	(5)	(6)	(7)
	ACTUA	A L	FORECA	A S T	FORECA	A S T
	2006		2007		2008	
	PEAK DEMAND	NEL	PEAK DEMAND	NEL	PEAK DEMAND	NEL
MONTH	MW	GWh	MW	GWh	MW	GWh
JANUARY	7,870	3,390	9,705	3,772	9,943	3,914
FEBRUARY	10,095	3,191	7,862	3,257	8,014	3,383
MARCH	6,441	3,286	6,692	3,509	6,863	3,631
APRIL	7,837	3,582	7,387	3,498	7,540	3,576
MAY	8,382	4,020	8,482	4,271	8,672	4,361
JUNE	9,349	4,401	8,905	4,478	9,071	4,574
JULY	9,462	4,699	9,156	4,867	9,337	4,985
AUGUST	9,689	4,920	9,327	4,919	9,525	5,047
SEPTEMBER	8,794	4,270	8,553	4,434	8,729	4,537
OCTOBER	8,286	3,763	7,975	3,982	8,202	4,076
NOVEMBER	6,415	3,192	6,463	3,426	6,569	3,502
DECEMBER	6,792	3,327	7,529	3,781	7,717	3,882
TOTAL	•	46,041		48,194		49,468

NOTE: "Actual" = "Total" - "Interruptible" - "Res. LM" - "C/I LM" - "Voltage Reduction & Standby Generation"

# FUEL REQUIREMENTS AND ENERGY SOURCES

PEF's two-year actual and ten-year projected nuclear, coal, oil, and gas requirements (by fuel units) are shown on Schedule 5. PEF's two-year actual and ten-year projected energy sources, in GWh and percent, are shown by fuel type on Schedules 6.1 and 6.2, respectively. PEF's fuel requirements and energy sources reflect a diverse fuel supply system that is not dependent on any one-fuel source. Natural gas consumption is projected to increase as plants and purchases with tolling agreements are added to meet future load growth. However, the planned nuclear addition in 2016 decreases future natural gas consumption as is shown in the projections.

#### SCHEDULE 5 FUEL REQUIREMENTS

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
				-ACT	UAL-										
	FUEL REQUIREN	<u>AENTS</u>	UNITS	<u>2005</u>	<u>2006</u>	<u>2007</u>	2008	<u>2009</u>	<u>2010</u>	<u>2011</u>	<u>2012</u>	2013	2014	<u>2015</u>	<u>2016</u>
(1)	NUCLEAR		TRILLION BTU	60	66	61	69	52	69	64	81	75	81	75	135
(2)	COAL		1,000 TON	6,249	5.977	6,179	6,059	6,240	6,389	6,977	6,959	6,728	6,874	6.951	6,792
(3)	RESIDUAL	TOTAL	1,000 BBL	10,324	7,353	9,646	8,490	6,338	5,030	5,522	5,384	5,152	5,307	5,190	4,780
(4)		STEAM	1.000 BBL	10,324	7,353	9,646	8,490	6,338	5,030	5,522	5,384	5,152	5,307	5,190	4,780
(5)		CC	1,000 BBL	0	0	0	0	0	0	0	0	0	0	0	0
(6)		СТ	1,000 BBL	0	0	0	0	0	0	0	0	0	0	0	0
(7)		DIESEL	1,000 BBL	0	0	0	0	0	0	0	0	0	0	0	0
(8)	DISTILLATE	TOTAL	1,000 BBL	1,098	713	987	784	901	986	1,196	1,192	1,284	1,220	1,335	1,056
(9)		STEAM	1,000 BBL	97	90	41	38	46	54	53	44	54	42	47	45
(10)		сс	1,000 BBL	3	2	0	0	0	0	0	0	0	0	0	0
(11)		СТ	1,000 BBL	99 <b>8</b>	621	946	746	855	932	1,144	1,148	1,230	1,177	1.288	1,010
(12)		DIESEL	1,000 BBL	0	0	0	0	0	0	0	0	0	0	0	0
(13)	NATURAL GAS	TOTAL	1,000 MCF	68,447	76,448	83,645	100,282	129,303	140,233	150,996	149,977	168,758	180,835	193,010	175,170
(14)		STEAM	1,000 MCF	732	1,731	0	0	0	0	0	0	0	0	0	0
(15)		сс	1,000 MCF	52,590	61,487	65,316	84,124	112,747	125,315	133,815	132,786	151,618	164,412	175,697	159,507
(16)		СТ	1,000 MCF	15,125	13,230	18,328	16,159	16,556	14,918	17,180	17,191	17,140	16,423	17,312	15,663
	OTHER (SPECIFY)														
(17)	OTHER, DISTILLATE	ANNUAL	1,000 BBL	N/A	N/A	47	11	13	5	13	19	15	0	0	0
(18)	OTHER, NATURAL GA	SANNUAL	1,000 MCF	N/A	N/A	0	0	0	0	0	0	0	0	0	0
(18.1)	OTHER, NATURAL GA	SANNUAL	1,000 MCF	N/A	N/A	8,512	4,954	4,720	4,327	6,867	6,743	6,524	5,956	6,720	3,861

#### SCHEDULE 6.1 ENERGY SOURCES (GWh)

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
					TUAL-										
	ENERGY SOURCES		UNITS	2005	<u>2006</u>	<u>2007</u>	2008	2009	<u>2010</u>	2011	2012	2013	2014	<u>2015</u>	2016
(1)	ANNUAL FIRM INTERCHANGE	1/	GWh	2.220	2,091	2,200	1.854	1,881	1,750	734	689	672	592	669	349
(2)	NUCLEAR		GWh	5.829	6,382	5,951	6.671	5,099	6,992	6.473	8,114	7,575	8,183	7,576	13.385
(3)	COAL		GWh	15,834	14,968	15,260	14,781	15,187	14,782	16,149	16,108	15.568	15.900	16,083	15,680
(4)	RESIDUAL	TOTAL	GWh	6.618	4.656	5,968	5,217	3.894	3,092	3,418	3.329	3,181	3.278	3,207	2.926
(5)		STEAM	GWh	6,618	4,656	5,968	5,217	3,894	3.092	3.418	3,329	3,181	3.278	3,207	2,926
(6)		CC	GWh	0	0	0	0	0	0	0	0	0	0	D	0
(7)		СТ	GWh	0	0	0	0	0	0	0	0	0	0	0	0
(8)		DIESEL	GWh	0	0	0	0	0	D	0	0	0	0	0	0
(9)	DISTILLATE	TOTAL	GWh	414	258	364	277	321	356	449	451	495	464	511	394
(10)		STEAM	GWħ	0	0	0	0	0	0	0	0	0	0	0	0
(11)		сс	GWh	0	1	0	0	0	0	0	0	0	0	0	0
(12)		СТ	GWh	414	257	364	277	321	356	449	451	495	464	511	394
(13)		DIESEL	GWh	0	0	0	O	0	0	٥	0	0	0	0	0
(14)	NATURAL GAS	TOTAL	GWh	8,236	9,657	10.408	12,714	16.828	18,507	19,966	19,780	22,442	24.111	25,777	23,266
(15)		STEAM	GWh	74	161	0	0	0	0	0	0	0	٥	D	D
(16)		СС	GWh	7,025	8,517	9,002	11,480	15,510	17,328	18,601	18,416	21,070	22.809	24,400	22,014
(17)		CT	GWh	1,137	979	1,406	1.234	1,318	1,179	1.365	1,363	1,372	1,303	1,377	1,252
(18)	OTHER 2/														
	QF PURCHASES		GWh	4.211	4,394	3,357	3,247	2,552	2.460	2.463	2,468	2.283	1.473	1,473	1,476
	RENEWABLES		GWh			1,145	1,231	1,301	2,064	2,062	2,065	2,033	1,700	1,658	1,657
	IMPORT FROM OUT OF STATE		GWh	3,599	3,683	3,542	3,476	3,546	2.512	2,061	2.014	2,072	2,031	2,121	1,328
	EXPORT TO OUT OF STATE		GWh	-83	-48	0	0	0	0	0	0	0	0	0	0
(19)	NET ENERGY FOR LOAD		GWh	46.878	46.041	48,194	49,468	50,609	52,516	53,776	55.017	56,321	57,732	59,074	60,460

1/ NET ENERGY PURCHASED (+) OR SOLD (-) WITHIN THE FRCC REGION.

2/ NET ENERGY PURCHASED (+) OR SOLD (-).

## SCHEDULE 6.2 ENERGY SOURCES (PERCENT)

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
				-ACT	UAL-										
	ENERGY SOURCES		<u>UNITS</u>	2005	<u>2006</u>	<u>2007</u>	<u>2008</u>	<u>2009</u>	<u>2010</u>	<u>2011</u>	2012	2013	2014	2015	2016
(1)	ANNUAL FIRM INTERCHANGE	1/	%	4.7%	4.5%	4.6%	3.7%	<b>3</b> .7%	3.3%	1.4%	1.3%	1. <b>2%</b>	1.0%	1.1%	0.6%
(2)	NUCLEAR		%	12.4%	13.9%	12.3%	13.5%	10.1%	13.3%	12.0%	14.7%	13.4%	14.2%	12.8%	22.1%
(3)	COAL		%	33.8%	32.5%	31.7%	29.9%	30.0%	28.1%	30.0%	29.3%	27.6%	27.5%	27.2%	25.9%
(4)	RESIDUAL	TOTAL	%	14.1%	10.1%	12.4%	10.5%	7.7%	5.9%	6.4%	6.1%	5.6%	5.7%	5.4%	4.8%
(5)		STEAM	%	14.1%	10.1%	12.4%	10.5%	7.7%	5.9%	6.4%	6.1%	5.6%	5.7%	5.4%	4.8%
(6)		СС	%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
(7)		СТ	%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
(8)		DIESEL	%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
(0)	DISTILLATE	TOTAL	%	0.9%	0.6%	0.8%	0.6%	0.6%	0.7%	0.8%	0.8%	0.9%	0.8%	0.9%	0.7%
(9)	DISTILLATE	STEAM	~~ %	0.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
(10) (11)		CC	%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
(11)		СС	%	0.9%	0.6%	0.8%	0.6%	0.6%	0.7%	0.8%	0.8%	0.9%	0.8%	0.9%	0.7%
(12)		DIESEL	%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
(13)		DIEGEE	70	0.070	0.070	0.070	0.070	0.070	0.070	0.070	0.070	0.070	0.075	0.070	0.070
(14)	NATURAL GAS	TOTAL	%	17.6%	<b>2</b> 1.0%	21.6%	25.7%	33.3%	35.2%	37.1%	36.0%	39.8%	41.8%	43.6%	38.5%
(15)		STEAM	%	0.2%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
(16)		сс	%	15.0%	18.5%	18.7%	23.2%	30.6%	33.0%	34.6%	33.5%	37.4%	39.5%	41.3%	36.4%
(17)		СТ	%	2,4%	2.1%	2.9%	2.5%	2.6%	2.2%	2.5%	2.5%	2.4%	2.3%	2.3%	2.1%
(18)	OTHER 2/														
()	OF PURCHASES		%	9.0%	9.5%	7.0%	6.6%	5.0%	4.7%	4.6%	4.5%	4.1%	2.6%	2.5%	2.4%
	IMPORT FROM OUT OF STATE		%	7,7%	8.0%	7.3%	7.0%	7.0%	4.8%	3.8%	3.7%	3.7%	3.5%	3.6%	2.2%
	EXPORT TO OUT OF STATE		%	-0.2%	-0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
(19)	NET ENERGY FOR LOAD		%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

1/ NET ENERGY PURCHASED (+) OR SOLD (-) WITHIN THE FRCC REGION.

2/ NET ENERGY PURCHASED (+) OR SOLD (-).

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# FORECASTING METHODS AND PROCEDURES

# INTRODUCTION

Accurate forecasts of long-range electric energy consumption, customer growth, and peak demand are essential elements in electric utility planning. Accurate projections of a utility's future load growth require a forecasting methodology with the ability to account for a variety of factors influencing electric energy usage over the planning horizon. PEF's forecasting framework utilizes a set of econometric models to achieve this end. This section will describe the underlying methodology of the customer, energy, and peak demand forecasts including the principal assumptions incorporated within each. Also included is a description of how Demand-Side Management (DSM) impacts the forecast, the development of high and low forecast scenarios and a review of DSM programs.

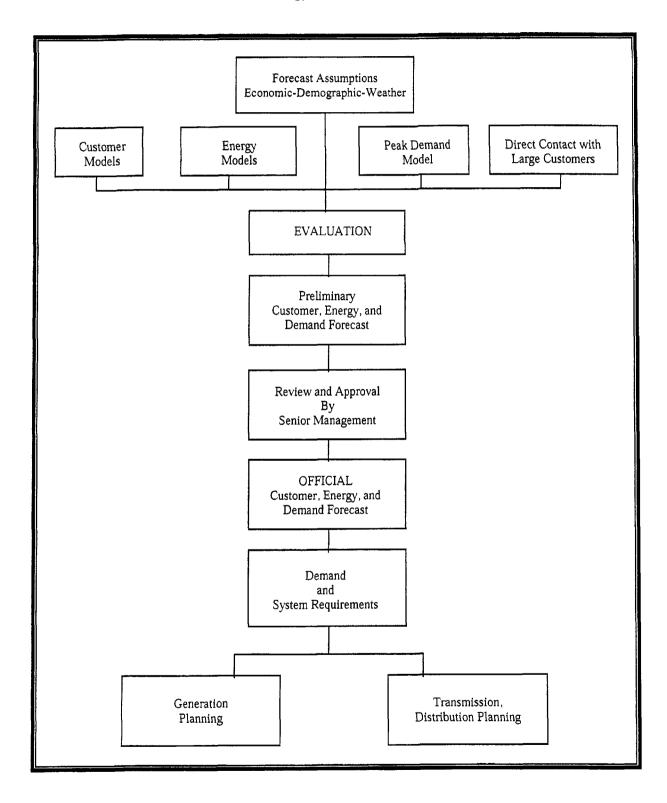
Figure 2.1, entitled "Customer, Energy and Demand Forecast", gives a general description of PEF's forecasting process. Highlighted in the diagram is a disaggregated modeling approach that blends the impacts of average class usage as well as customer growth based on a specific set of assumptions for each class. Also accounted for is some direct contact with large customers. These inputs provide the tools needed to frame the most likely scenario of the company's future demand.

# FORECAST ASSUMPTIONS

The first step in any forecasting effort is the development of assumptions upon which the forecast is based. The Corporate Planning Department develops these assumptions based on discussions with a number of departments within PEF, as well as through the research efforts of a number of external sources. These assumptions specify major factors that influence the level of customers, energy sales, or peak demand over the forecast horizon. The following set of assumptions forms the basis for the forecast presented in this document.

# FIGURE 2.1

# Customer, Energy, and Demand Forecast



# GENERAL ASSUMPTIONS

- 1. Normal weather conditions for energy sales are assumed over the forecast horizon using a salesweighted thirty-year average of conditions at seven weather stations across Florida (St. Petersburg, Tampa, Orlando, Winter Haven, Gainesville, Daytona, and Tallahassee). For kilowatt-hour sales projections, normal weather is based on a historical thirty-year average of service area weighted billing month degree-days. Seasonal peak demand projections are based on a thirty-year historical average of system-weighted temperatures at time of seasonal peak at the Tampa, Orlando, and Tallahassee weather stations; the other weather stations are not used in developing the historic average because they lack the data needed for peak-weather normalization.
- 2. The population projections produced by the Bureau of Economic and Business Research (BEBR) at the University of Florida as published in "Florida Population Studies Bulletin No. 144 (February 2006) provide the basis for development of the customer forecast. State and national economic assumptions produced by Economy.Com in their national and Florida forecasts (March 2006) are also incorporated.
- 3. Within the PEF service area the phosphate mining industry is the dominant sector in the industrial sales class. Four major customers accounted for 30% of the industrial class MWh sales in 2006. These energy intensive customers mine and process phosphate-based fertilizer products for the global marketplace. Both supply and demand conditions for their products are dictated by global conditions that include, but are not limited to, foreign competition, national/international agricultural industry conditions, exchange-rate fluctuations, and international trade pacts. Load and energy consumption at the PEF-served mining or chemical processing sites depend heavily on plant operations, which are heavily influenced by the state of these global conditions as well as local conditions. After years of excess mining capacity and weak product pricing power, the industry has consolidated down to fewer players in time to take advantage of better market conditions. Also, a weaker U.S currency value on the foreign exchange is expected to help the industry in two ways. First, American farm commodities will be more competitive overseas and lead to higher crop production at home. This will result in greater demand for fertilizer products. Second, a weak U.S. dollar results in U.S. fertilizer

producers becoming more price competitive relative to foreign producers. Going forward, energy consumption is expected to increase in the near term, as a new mine operation is expected to open. A significant risk to this projection lies in the volatile price of energy (natural gas), which is a major cost of fertilizer production. Operations at several sites in the U.S. have already scaled back or shutdown in 2005-2006 due to profitability concerns caused by high energy prices. The energy projection for this industry assumes no major reductions or shutdowns of operations in the service territory.

- 4. PEF supplies load and energy service to wholesale customers on a "full", "partial", and "supplemental" requirement basis. Full requirements (FR) customers' demand and energy is assumed to grow at a rate that approximates their historical trend. Contracts for this service include the cities of Bartow, Chattahoochee, Mt. Dora, Quincy, Williston, and Winter Park. Partial requirements (PR) customer load is assumed to reflect the current contractual obligations reflected by the nature of the stratified load they have contracted for, plus their ability to receive dispatched energy from power marketers any time it is more economical for them to do so. Contracts for PR service included in this forecast are with the Florida Municipal Power Agency (FMPA), New Smyrna Beach, Tallahassee, Homestead, Reedy Creek Utilities, TECO Energy (Market Mitigation Sale) and Seminole Electric Cooperative, Inc. (SECI). PEF's contractual arrangement with SECI includes a "supplemental" service contract (1983 contract) for service over and above stated levels they commit to supply themselves. This contract is projected to become a "winter only" seasonal purchase in 2014 when the term of this contract expires in December 2013. A firm PR contract with SECI includes 450 MW of stratified intermediate service (October 1995 contract) which is projected to continue through the forecast horizon. In addition, a FR contract to serve SECI load, will commence in 2010, and last through the forecast horizon. Finally, an agreement to provide interruptible service at a SECI metering site has also been included in this projection.
- 5. This forecast assumes that PEF will successfully renew all future franchise agreements.
- 6. This forecast incorporates demand and energy reductions from PEF's dispatchable and nondispatchable DSM programs required to meet the approved goals set by the FPSC.

- 7. Expected energy and demand reductions from self-service cogeneration are also included in this forecast. PEF will supply the supplemental load of self-service cogeneration customers. While PEF offers "standby" service to all cogeneration customers, the forecast does not assume an unplanned need for standby power.
- 8. This forecast assumes that the regulatory environment and the obligation to serve our retail customers will continue throughout the forecast horizon. Regarding wholesale customers, the company does not plan for generation resources unless a long-term contract is in place. Current FR customers are assumed to renew their contracts with PEF except those who have given notice to terminate. Current PR contracts are projected to terminate as terms reach their expiration date. Deviation from these assumptions can occur based on information provided by the Regulated Commercial Operations Department.

# SHORT-TERM ECONOMIC ASSUMPTIONS

The economic outlook for this forecast was developed in 2006 as energy prices were hitting record highs around the world. The consensus was that the U.S. economy, which was growing at a reasonable rate, would not slip into recession due to the higher cost of energy. Instead, a "soft patch" in economic activity apparent at the time of this forecast development as high gasoline prices had been reducing consumer confidence levels. Short term interest rates, controlled mostly by Federal Reserve Board (FED) policy decisions, peaked in mid-2006 and have remained stable after 17 increases based upon signs coming from a weakening construction industry and lower inflation. Economists are not in complete agreement about where monetary policy may go from here. A slight majority suspect that the FED has ended its "tightening" policy of gradually raising interest rates as opposed to those who believe that new inflationary fears will require more rate increases.

Consensus opinion believes that the economic stimulus supplied by the three federal tax cuts and the refinancing boom have successfully kept the U.S. economy out of recession after the September 11, 2001 terrorist attacks. Now, with rates back up to more normal levels, and talk of rescinding some of the tax cuts, stimulus from these two economic tools is not expected going forward. One item believed to become a positive factor for future economic momentum is the weaker U.S. currency. Up to this point several major U.S. trading partners, mainly China, have their currencies pegged to

the U.S. Dollar. This has kept the typical advantages of a weaker currency from helping U.S. manufacturers. Going forward, it is expected that economic and political pressures will force the Chinese to de-link their currency and allow it to appreciate in value. This likely will make American-produced products more competitive with imported Chinese goods, as well as other goods produced around the globe.

The housing sector, which had a record run in the first half of the decade, has peaked and has now slowed. While the fall-off in housing starts has only taken the industry down to normal levels seen before the run-up, no one feels confident predicting when the bottom will be reached. Home sales have dipped significantly and the number of unsold and even vacant homes has hit record levels leading to significant price reductions in some areas of the country. On top of all this, the number of foreclosures and mortgages in default has risen of late. More homeowners, struggling to meet higher payments from adjustable-rate loans, are walking away from homes as they become "upside-down" in the mortgage (when the market price falls below the outstanding loan amount.) All of this does not bode well for Florida, which played a major part in the recent housing boom. In order to grow out of this, migration into the State will need to absorb this overhang in available housing at a time when out-of-state homeowners may have a difficult time selling their property.

The Florida economy has faired much better than the nation, especially in terms of job growth. The tourism industry, which has bounced back from the terrorism fears of 2001, will now have to juggle the impact of high oil prices on the travel industry. Also, the increases in property insurance and property taxes in Florida have caused anxiety. Florida's reputation as a low cost-of-living state has been impacted.

Besides growth in State population, growth in energy consumption can also be directly tied to the levels of economic activity as measured by total personal income and employment. Florida has experienced excellent employment growth since the last recession – better than most other states. However, due to the run-up in energy prices, the need for greater national energy independence and the wider review of the potential effects of climate change upon the environment, energy consumption of all types and at all consumer levels are coming under greater scrutiny. In addition, federal and state tax incentives to conserve energy are becoming more widespread and energy-saving

capital improvements are becoming more economically viable. Even players with significant economic influence – like Wal-Mart stores – are pressing their suppliers to become more energy efficient. Just as occurred after each of the Arab oil embargoes, all of these factors may drive the country to improve energy use per unit of Gross Domestic Product (GDP), which could reduce the growth in energy demand. The level of energy prices will obviously play a major role in the outcome.

### LONG-TERM ECONOMIC ASSUMPTIONS

The long-term economic outlook assumes that changes in economic and demographic conditions will follow a trended behavior pattern. The main focus involves identifying these trends. No attempt is made to predict business cycle fluctuations during this period.

## **Population Growth Trends**

This forecast assumes Florida will experience slower in-migration and population growth over parts of the long term, as reflected in the BEBR projections. Florida's climate and low cost of living have historically attracted a major share of the retirement population from the eastern half of the United States. This will continue to occur, but at less than historic rates for several reasons. First, Americans entering retirement age during the late 1990s and early twenty-first century were born during the Great Depression era of the 1930s. This decade experienced a low birth rate due to the economic conditions at that time. Now that this generation is retiring, there exists a smaller pool of retirees capable of migrating to Florida. As we enter into the second decade of the new century and the baby-boom generation enters retirement age, the reverse effect can be expected.

Second, the enormous growth in population and corresponding development of the 1980s, 1990s and early 2000s made portions of Florida less desirable and less affordable for retirement living. This diminished the quality of retiree life, and along with increasing competition from neighboring states, is expected to cause a slight decline in Florida's share of these prospective new residents over the long term.

Hearing Exhibit - 000153

Another reason for a population growth slowdown appears to be the fear and expense of Hurricanes. The summers of 2004 and 2005 may force some in-migrants to rethink their retirement location as the inconvenience caused by recent destruction and ever-increasing cost of property insurance makes Florida a less desirable place to live.

# Economic Growth Trends

Florida has been recently experiencing a 1980s-style population explosion and service sector job creation. The State has benefited greatly from generational lows in interest rates, which along with investors' unfriendly attitude toward the equity markets, set the stage for a tremendous explosion in home construction. The national level of homebuilding in 2005, which rose to more than 31% higher than in 2000, set an all time record. This growth produced strong gains in both the construction industry and service-producing sectors of the Florida economy.

We now see that this pace of growth has not been sustained, and the economic environment that produced this construction boom has returned to normal. Interest rates have risen to more "long term" norms. Investment in equity markets over housing has occurred as well. More importantly, affordability rates have dropped as housing prices in many parts of Florida have out-paced many areas of the country. This could have a major impact on retiree decisions to move into the area. Making matters worse is the availability and affordability of homeowners insurance, which has become a concern of increasing importance since the Hurricane seasons of 2004 and 2005.

Florida's rapid population growth of late has created a period of strong job creation, especially in the service sector industries. While the service-oriented economy expanded to support an increasing population level, there were also a number of corporations migrating to Florida capitalizing on the low cost, low tax business environment. This being the case, increased job opportunities in Florida created greater in-migration among the nation's working age population. Florida's ability to attract businesses from other states because of its "comparative advantage" is expected to continue throughout the forecast period but at a less significant level. Florida's successful effort to attract a large biotech firm, Scripps Research, has the potential to draw a whole new growth industry to the State, the same way Disney and NASA once did.

The forecast assumes negative growth in real electricity price. That is, the change in the nominal price of electricity per kWh over time is expected to be less than the overall rate of inflation. This also implies that future fuel price escalation will track at or below the general rate of inflation throughout the forecast horizon.

Real personal incomes are assumed to increase throughout the forecast period thereby boosting the average customer's ability to purchase electricity. As incomes grow faster than the price of electricity, consumers, on average, will remain inclined to purchase additional electric appliances and increase their utilization of existing end-uses.

# FORECAST METHODOLOGY

The PEF forecast of customers, energy sales, and peak demand is developed using customer class-specific econometric models. These models are expressly designed to capture class-specific variation over time. By modeling customer growth and average energy usage individually, subtle changes in existing customer usage are better captured as well as growth from new customers. Peak demand models are projected on a disaggregated basis as well. This allows for appropriate handling of individual assumptions in the areas of wholesale contracts, load management, and interruptible service.

## **ENERGY AND CUSTOMER FORECAST**

In the retail jurisdiction, customer class models have been specified showing a historical relationship to weather and economic/demographic indicators using monthly data for sales models and annual data for customer models. Sales are regressed against "driver" variables that best explain monthly fluctuations over the historical sample period. Forecasts of these input variables are either derived internally or come from a review of the latest projections made by several independent forecasting concerns. The external sources of data include Moody's Economy.Com and the University of Florida's Bureau of Economic and Business Research. Internal company forecasts are used for projections of electricity price, weather conditions, and the length of the billing month. Normal weather, which is assumed throughout the forecast horizon, is based on the 30-year average of heating and cooling degree-days by month as measured at several weather stations throughout Florida for energy projections and temperatures around the hour of peak for the

firm retail demand forecast. Projections of PEF's demand-side management (conservation programs) are also incorporated as reductions to the forecast. Specific sectors are modeled as follows:

# **Residential Sector**

Residential kWh usage per customer is modeled as a function of real Florida personal income, cooling degree-days, heating degree-days, the real price of electricity to the residential class and the average number of billing days in each sales month. This equation captures significant variation in residential usage caused by economic cycles, weather fluctuations, electric price movements, and sales month duration. Projections of kWh usage per customer combined with the customer forecast provide the forecast of total residential energy sales. The residential customer forecast is developed by correlating annual customer growth with PEF service area population growth and mortgage rates. County level population projections for the 29 counties, in which PEF serves residential customers, are provided by the BEBR.

## **Commercial Sector**

Commercial MWh energy sales are forecast based on commercial (non-agricultural, nonmanufacturing and non-governmental) employment, the real price of electricity to the commercial class, the average number of billing days in each sales month and heating and cooling degree-days. The measure of cooling degree-days utilized here differs slightly from that used in the residential sector reflecting different temperature bases where heating and cooling load become observable. Commercial customers are projected as a function of the number of residential customers served.

## **Industrial Sector**

Energy sales to this sector are separated into two sub-sectors. A significant portion of industrial energy use is consumed by the phosphate mining industry. Because this one industry comprises nearly a 30% share of the total industrial class, it is separated and modeled apart from the rest of the class. The term "non-phosphate industrial" is used to refer to those customers who comprise the remaining portion of total industrial class sales. Both groups are impacted significantly by changes in economic activity. However, adequately explaining sales levels requires separate explanatory variables. Non-phosphate industrial energy sales are modeled using Florida manufacturing

employment and a Florida industrial production index developed by Economy.Com, the real price of electricity to the industrial class, and the average number of sales month billing days.

The industrial phosphate mining industry is modeled using customer-specific information with respect to expected market conditions. Since this sub-sector is comprised of only four customers, the forecast is dependent upon information received from direct customer contact. PEF industrial customer representatives provide specific phosphate customer information regarding customer production schedules, inventory levels, area mine-out and start-up predictions, and changes in self-service generation or energy supply situations over the forecast horizon.

# Street Lighting

Electricity sales to the street and highway lighting class are projected to increase due to growth in the service area population base. Because this class comprised less than 0.01% of PEF's 2006 electric sales and just 0.1% of total customers, a simple time trend was used to project energy consumption and customer growth in this class.

#### **Public** Authorities

Energy sales to public authorities (SPA), comprised mostly of government operated services, is also projected to grow with the size of the service area. The level of government services, and thus energy use per customer, can be tied to the population base, as well as to the state of the economy. Factors affecting population growth will affect the need for additional governmental services (i.e., schools, city services, etc.) thereby increasing SPA energy usage per customer. Government employment has been determined to be the best indicator of the level of government services provided. This variable, along with heating and cooling degree-days (class specific), the real price of electricity and the average number of sales month billing days, results in a significant level of explained variation over the historical sample period. Intercept shift variables are also included in this model to account for the large change in school-related energy use in the billing months of January, July, and August. SPA customers are projected linearly as a function of a time-trend.

# Sales for Resale Sector

The Sales for Resale sector encompasses all firm sales to other electric power entities. This includes sales to other utilities (municipal or investor-owned) as well as power agencies (Rural Electric Authority or Municipal).

SECI is a wholesale, or sales for resale, customer of PEF on both a supplemental contract basis and contract demand basis. Under the supplemental contract, PEF provides service for those energy requirements above the level of generation capacity served by either SECI's own facilities or its firm purchase obligations. Monthly supplemental energy is developed using an average historical load shape of total SECI load in the PEF control area, subtracting out the level of SECI "committed" capacity from each hour. Beyond supplemental service, PEF has an agreement with SECI to serve stratified intermediate and peaking energy. This agreement involves serving 450 MW of stratified intermediate demand that is assumed to remain a requirement on the PEF system throughout the forecast horizon. A "winter-only" seasonal peaking strata contract for 600 MW will replace the supplemental contract in 2014. An agreement to provide non-firm service is currently in effect between PEF and SECI amounting to an estimated 15 MW. Another contract, signed in 2004 to supply full requirements service for 150 MW, will begin in 2010.

The municipal sales for resale class includes a number of customers, divergent not only in scope of service, (i.e., full or partial requirement), but also in composition of ultimate consumers. Each customer is modeled separately in order to accurately reflect its individual profile. Several of the customers in this class are municipalities whose full energy requirements are met by PEF. The full requirement customers are modeled individually using local weather station data and population growth trends. Since the ultimate consumers of electricity in this sector are, to a large degree, residential and commercial customers, it is assumed that their use patterns will follow those of the PEF retail-based residential and commercial customer classes. PEF serves partial requirement service (PR) to municipalities such as New Smyrna Beach (NSB), Homestead, and Tallahassee, and other power providers like FMPA. In each case, these customers contract with PEF for a specific level and type of demand needed to provide their particular electrical system with an appropriate level of reliability. The terms of the FMPA contract is subject to change each year via a letter of

"declared" MW nomination. More specifically, this means that the level and type of demand and energy under contract can increase or decrease for each year a value is nominated. The energy forecast for each contract is derived using its historical load factors where enough history exists, or typical load factors for a given type of contracted stratified load. The energy projections for FMPA also include a "losses service contract" for energy PEF supplies to FMPA for transmission losses incurred when "wheeling" power to their ultimate customers in PEF's transmission area. This projection is based on the projected requirements of the aggregated needs of the cities of Ocala, Leesburg, Bushnell, Havana, and Newberry.

## PEAK DEMAND FORECAST

The forecast of peak demand also employs a disaggregated econometric methodology. For seasonal (winter and summer) peak demands, as well as each month of the year, PEF's coincident system peak is dissected into five major components. These components consist of potential firm retail load, conservation and load management program capability, wholesale demand, company use demand and interruptible demand.

Potential firm retail load refers to projections of PEF retail hourly seasonal net peak demand (excluding the non-firm interruptible/curtailable/standby services) before the cumulative effects of any conservation activity or the activation of PEF's Load Management program. The historical values of this series are constructed to show the size of PEF's firm retail net peak demand assuming no utility-induced conservation or load control had taken place. The value of constructing such a "clean" series enables the forecaster to observe and correlate the underlying trend in retail peak demand to total system customer levels and coincident weather conditions at the time of the peak without the impacts of year-to-year variation in conservation activity or load control reductions. Seasonal peaks are projected using historical seasonal peak data regardless of which month the peak occurred. The projections become the potential retail demand projection for the month of January (winter) and August (summer) since this is typically when the seasonal peaks occur. The non-seasonal peak months are projected the same as the seasonal peaks, but the analysis is limited to the specific month being projected.

Energy conservation and direct load control estimates are consistent with PEF's DSM goals that have been approved by the FPSC. These estimates are incorporated into the MW forecast. Projections of dispatchable and cumulative non-dispatchable DSM are subtracted from the projection of potential firm retail demand resulting in a projected series of retail demand figures one would expect to occur.

Sales for Resale demand projections represent load supplied by PEF to other electric utilities such as SECI, FMPA, and other electric distribution companies. The SECI supplemental demand projection is based on a trend of their historical demand within the PEF control area. The level of MW to be served by PEF is dependent upon the amount of generation resources SECI supplies itself or contracts from others. An assumption has been made that beyond the last year of committed capacity declaration (five years out), SECI will shift their level of self-serve resources to meet their base and intermediate load needs. For FMPA and NSB demand projections, historical ratios of coincident-to-contract levels of demand are applied to future MW contract levels. Demand requirements continue at the MW level indicated by the final year in their respective contract declaration letter. The full requirements municipal demand forecast is estimated for individual cities using linear econometric equations modeling both weather and economic impacts specific to each locale. The seasonal (winter and summer) projections become the January and August peak values, respectively. The non-seasonal peak months are calculated using monthly allocation factors derived from applying the historical relationship between each winter month (November to March) relative to the winter peak, and each summer month (April to October) in relation to the summer peak demand.

PEF "company use" at the time of system peak is estimated using load research metering studies and is assumed to remain stable over the forecast horizon. The interruptible and curtailable service (IS and CS) load component is developed from historic trends, as well as the incorporation of specific information obtained from PEF's large industrial accounts by field representatives.

Each of the peak demand components described above is a positive value except for the DSM program MW impacts and IS and CS load. These impacts represent a reduction in peak demand

and are assigned a negative value. Total system firm peak demand is then calculated as the arithmetic sum of the five components.

# HIGH AND LOW FORECAST SCENARIOS

The high and low bandwidth scenarios around the base MWh energy sales forecast are developed using a Monte Carlo simulation applied to a multivariate regression model that closely replicates the base retail MWh energy forecast in aggregate. This model accounts for variation in Gross Domestic Product, retail customers and electricity price. The base forecasts for these variables were developed based on input from Economy.Com and internal company price projections. Variation around the base forecast predictor variables used in the Monte Carlo simulation was based on an 80 percent confidence interval calculated around variation in each variable's historic growth rate. While the total number of degree-days (weather) was also incorporated into the model specification, the high and low scenarios do not attempt to capture extreme weather conditions. Normal weather conditions were assumed in all three scenarios.

The Monte Carlo simulation was produced through the estimation of 1,000 scenarios for each year of the forecast horizon. These simulations allowed for random normal variation in the growth trajectories of the economic input variables (while accounting for cross-correlation amongst these variables), as well as simultaneous variation in the equation (model error) and coefficient estimates. These scenarios were then sorted and rank ordered from one to a thousand, while the simulated scenario with no variation was adjusted to equal the base forecast.

The low retail scenario was chosen from among the ranked scenarios resulting in a bandwidth forecast reflecting an approximate probability of occurrence of 0.10. The high retail scenario similarly represents a bandwidth forecast with an approximate probability of occurrence also at 0.10. In both scenarios, the high and low peak demand bandwidth forecasts, are projected from the energy forecasts using the load factor implicit in the base forecast scenario.

# **CONSERVATION**

PEF's DSM performance is shown in the following tables, which compare the conservation savings actually achieved through PEF's DSM programs for the reporting years of 2005 and 2006 with the Commission-approved conservations goals.

On August 9, 2004, the FPSC issued a PAA Order approving new conservation goals for PEF that span the ten-year period from 2005 through 2014, as well as a new DSM Plan for PEF that was specifically designed to meet the new conservation goals. (Docket 040031-EG, Order No. PSC-04-0769-PAA-EG). On January 5, 2007, the FPSC issued a PAA Order approving 39 additional DSM measures and 2 residential programs, which will serve to increase the demand and energy savings available through PEF's DSM Plan. (Docket 060647: Consummating Order PSC-07-0017-CO-EG making Order PSC-06-1018-TRF-EG effective and final.)

**Residential Conservation Savings Goals and Achievements** 

	Sur	nmer MW	W	inter MW	Annua	l GWh Energy
Year	Goal	Achieved	Goal	Achieved	Goal	Achieved
2005	13	18	43	48	21	29
2006	21	37	75	99	35	58

	Sur	nmer MW	W	inter MW	Annua	l GWh Energy
Year	Goal	Achieved	Goal	Achieved	Goal	Achieved
2005	4	8	3	6	3	3
2006	7	16	7	12	6	9

**Commercial Conservation Savings Goals and Achievements** 

The forecasts contained in this Ten-Year Site Plan document are based on these 2007 program additions and modifications to PEF's DSM Plan and, therefore, appropriately reflect the most current projection of DSM savings over the next ten years. PEF's DSM Plan consists of seven residential programs, eight commercial and industrial programs, and one research and development program. On January 5, 2007, the FPSC issued a PAA Order approving 39 additional DSM measures and 2 residential programs. (Docket 060647: Consummating Order PSC-07-0017-CO-EG making Order PSC-06-1018-TRF-EG effective and final). Megawatt contributions to the TYSP, reflected in this report, have increased as a result of these changes to conservation, standby and residential load management programs. The programs are subject to periodic monitoring and evaluation for the purpose of ensuring that all DSM resources are acquired in a cost-effective manner and that the program savings are durable. Following is a brief description of these programs.

### **RESIDENTIAL PROGRAMS**

# Home Energy Check Program

This energy audit program provides customers with an analysis of their current energy use and recommendations on how they can save on their electricity bills through low-cost or no-cost energy-saving practices and measures. The Home Energy Check program offers PEF customers the following types of audits: Type 1: Free Walk-Through Audit (Home Energy Check); Type 2: Customer-completed Mail In Audit (Do It Yourself Home Energy Check); Type 3: Online Home Energy Check (Internet Option)-a customer-completed audit; Type 4: Phone Assisted Audit –A customer assisted survey of structure and appliance use; Type 5: Computer Assisted Audit; Type 6: Home Energy Rating Audit (Class I, II, III). Additionally, a student audit was piloted in 2006. The Home Energy Check Program serves as the foundation of the Home Energy Improvement Program in that the audit is a prerequisite for participation in the energy saving measures offered in the Home Energy Improvement Program.

# Home Energy Improvement Program

This is the umbrella program to increase energy efficiency for existing residential homes. It combines efficiency improvements to the thermal envelope with upgraded electric appliances. The program provides incentives for attic insulation upgrades, duct testing and repair, and high efficiency electric heat pumps. The additional measures within this program include spray-in wall insulation, central AC 14 SEER non-electric heat, supply and return plenum duct seal, proper sizing of hi-efficiency HVAC, HVAC commissioning, reflective roof coating for

manufactured homes, reflective roof for single-family homes, window film or screen, and replacement windows.

# **Residential** New Construction Program

This program promotes energy efficient new home construction in order to provide customers with more efficient dwellings combined with improved environmental comfort. The program provides education and information to the design and building community on energy efficient equipment and construction. It also facilitates the design and construction of energy efficient homes by working directly with the builders to comply with program requirements. The program provides incentives to the builder for high efficiency electric heat pumps and high performance windows. The highest level of the program incorporates the Environmental Protection Agency's Energy Star Homes Program and qualifies participants for cooperative advertising. New measures within the Residential New Construction Program include HVAC commissioning, window film or screen, reflective roof for single-family homes, attic spray-on foam insulation, conditioned space air handler and energy recovery ventilation.

## Low Income Weatherization Assistance Program

This umbrella program seeks to improve energy efficiency for low-income customers in existing residential dwellings. It combines efficiency improvements to the thermal envelope with upgraded electric appliances. The program provides incentives for attic insulation upgrades, duct testing and repair, reduced air infiltration, water heater wrap, HVAC maintenance, high efficiency heat pumps, heat recovery units, and dedicated heat pump water heaters.

## Neighborhood Energy Saver Program

The newly approved Neighborhood Energy Saver (NES) Program consists of 12 measures including compact fluorescent bulb replacement, water heater wrap and insulation for water pipes, water heater temperature check and adjustment, low-flow faucet aerator, low-flow showerhead / refrigerator coil brush, HVAC filters and weatherization measures (weather stripping / door sweeps / etc.). In addition to the installation of new conservation measures, an important component of this program is educating families on energy efficiency techniques and the promotion of behavioral changes to help customers control their energy usage.

# **Residential Energy Management Program**

This is a voluntary customer program that allows PEF to reduce peak demand and thus defer generation construction. Peak demand is reduced by interrupting service to selected electrical equipment with radio controlled switches installed on the customer's premises. These interruptions are at PEF's option, during specified time periods, and coincident with hours of peak demand. Participating customers receive a monthly credit on their electricity bills prorated above 600 kWh/month.

# Renewable Energy Saver Program (2007)

The Renewable Energy Saver Program is designed to reduce system peak demand and increase renewable energy generation on the PEF grid. The program seeks to meet the following overall goals:

- 1. Obtain energy and demand reductions that are significant and measurable.
- 2. Enhance customers/contractors awareness of the capabilities of renewable energy technologies.
- 3. Educate customers/contractors about additional opportunities to generate / use renewable energy.
- 4. Develop and offer renewable energy measures to the marketplace.
- 5. Minimize "lost opportunities" in the renewable energy market.
- 6. Increase participation in the PEF Load Management program.

The Renewable Energy Saver Program consists of two measures:

Solar Water Heater with Energy Management – This measure encourages residential customers to install a solar thermal water heating system. The customer must have whole house electric cooling, electric water heating, and electric heating to be eligible for this program. Pool heaters and photovoltaic systems would not qualify. In order to qualify for this incentive, the heating, air conditioning, and water heating systems must be on the Energy Management Program and the solar thermal system must provide a minimum of 50% of the water-heating load.

Solar Photovoltaics with Energy Management – This measure promotes environmental stewardship and renewable energy education through the installation of solar energy systems at schools within Progress Energy Florida's service territory. Customers participating in the Winter-Only Energy Management or Year-Round Energy Management plan can elect to donate their monthly credit toward the Solar Photovoltaics with Energy Management Fund. The fund will accumulate associated participant credits for a period of two years, at which time the customer may elect to renew for an additional two years. All proceeds collected from participating customers, and their associated monthly credits, will be used to promote photovoltaics and renewable energy education opportunities.

## COMMERCIAL/INDUSTRIAL (C/I) PROGRAMS

## **Business Energy Check Program**

This energy audit program provides commercial and industrial customers with an assessment of the current energy usage at their facilities, recommendations on how they can improve the environmental conditions of their facilities while saving on their electricity bills, and information on low-cost energy efficiency measures. The Business Energy Check consists of the following types of audits: A free walk-through audit, and a paid walk-through audit. Small business customers also have the option to complete a Business Energy Check online at Progress Energy's website. In most cases, this program is a prerequisite for participation in the other C/I programs.

# **Better Business Program**

This is the umbrella efficiency program for existing commercial and industrial customers. The program provides customers with information, education, and advice on energy-related issues and incentives on efficiency measures that are cost-effective to PEF and its customers. The Better Business Program promotes energy efficient heating, ventilation, air conditioning (HVAC), and some building retrofit measures (in particular, ceiling insulation upgrade, duct leakage test and repair, energy-recovery ventilation and Energy Star cool roof coating products.) Newly approved measures within this program include demand-control ventilation, efficient compressed air systems, efficient motors, efficient indoor lighting, green roof, occupancy sensors, packaged AC steam cleaning, roof insulation, roof-top unit recommissioning, thermal energy storage and window film or screen.

# Commercial/Industrial New Construction Program

The primary goal of this program is to foster the design and construction of energy efficient buildings. The new construction program: 1) provides education and information to the design community on all aspects of energy efficient building design; 2) requires that the building design, at a minimum, surpass the state energy code; 3) provides financial incentives for specific energy efficient equipment; and 4) provides energy design awards to building design teams. Incentives will be provided for high efficiency HVAC equipment, energy recovery ventilation and Energy Star cool roof coating products. Additional options, beginning in 2007, include demand-control ventilation, efficient compressed air systems, efficient motors, efficient indoor lighting, green roof, occupancy sensors, roof insulation, thermal Energy Storage and window film or screen.

# Innovation Incentive Program

This program promotes a reduction in demand and energy by subsidizing energy conservation projects for customers in PEF's service territory. The intent of the program is to encourage legitimate energy efficiency measures that reduce kW demand and/or kWh energy, but are not addressed by other programs. Energy efficiency opportunities are identified by PEF representatives during a Business Energy Check audit. If a candidate project meets program specifications, it will be eligible for an incentive payment, subject to PEF approval.

# Commercial Energy Management Program (Rate Schedule GSLM-1)

This direct load control program reduces PEF's demand during peak or emergency conditions. As described in PEF's DSM Plan, this program is currently closed to new participants. It is applicable to existing program participants who have electric space cooling equipment suitable for interruptible operation and are eligible for service under the Rate Schedule GS-1, GST-1, GSD-1, or GSDT-1. The program is also applicable to existing participants who have any of the following electrical equipment installed on permanent residential structures and utilized for domestic (household) purposes: 1) water heater(s), 2) central electric heating systems(s), 3) central electric cooling system(s), and/or 4) swimming pool pump(s). Customers receive a monthly credit on their bills depending on the type of equipment in the program and the interruption schedule.

# Standby Generation Program

This demand control program reduces PEF's demand based upon the indirect control of customer generation equipment. This is a voluntary program available to all commercial, industrial, and agricultural customers who have on-site generation capability and are willing to reduce their PEF demand when PEF deems it necessary. The customers participating in the Standby Generation program receive a monthly credit on their electricity bills according to the demonstrated ability of the customer to reduce demand at PEF's request.

# Interruptible Service Program

This direct load control program reduces PEF's demand at times of capacity shortage during peak or emergency conditions. The program is available to qualified non-residential customers with an average billing demand of 500 kW or more, who are willing to have their power interrupted. PEF will have remote control of the circuit breaker or disconnect switch supplying the customer's equipment. In return for this ability to interrupt load, customers participating in the Interruptible Service program receive a monthly interruptible demand credit applied to their electric bills.

## Curtailable Service

This direct load control program reduces PEF's demand at times of peak or emergency conditions. The program is available to qualified non-residential customers with an average billing demand of 500 kW or more, who are willing to curtail 25 percent of their average monthly billing demand. Customers participating in the Curtailable Service program receive a monthly curtailable demand credit applied to their electric bills.

# **RESEARCH AND DEVELOPMENT PROGRAMS**

# Technology Development Program

The primary purpose of this program is to establish a system to "Aggressively pursue research, development and demonstration projects jointly with others as well as individual projects" (Rule 25-17.001, {5}(f), Florida Administration Code). PEF will undertake certain development, educational and demonstration projects that have promise to become cost-effective demand reduction and energy efficiency programs. This would include projects like Broadband-Over-the

Power-Line-In-Premise load management capabilities, which the Company is currently evaluating and testing. The objective of this project is to develop the next generation of load management with goals of increasing customer awareness to efficiently use energy, while advancing demand response capabilities. Additional projects include the evaluation of off-peak generation storage for on-peak demand consumption. In most cases, each demand reduction and energy efficiency project that is proposed and investigated under this program requires field-testing with customers.

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# CHAPTER 3

FORECAST OF FACILITIES REQUIREMENTS



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# <u>CHAPTER 3</u> FORECAST OF FACILITIES REQUIREMENTS

# RESOURCE PLANNING FORECAST

# **OVERVIEW OF CURRENT FORECAST**

#### Supply-Side Resources

PEF has a summer total capacity resource of 10,752 MW, as shown in Table 3.1. This capacity resource includes nuclear (769 MW), fossil steam (3,903MW), combined cycle plants (1,659 MW), combustion turbine (2,513 MW, 143 MW of which is owned by Georgia Power for the months June through September), utility purchased power (484 MW), independent power purchases (611 MW), and non-utility purchased power (813 MW). Table 3.2 shows PEF's contracts for firm capacity provided by Qualifying Facilities (QF's).

## **Demand-Side** Programs

Total DSM resources are shown in Schedules 3.1.1 and 3.2.1 of Chapter 2. These programs include Non-Dispatchable DSM, Interruptible Load, and Dispatchable Load Control resources. PEF's 2007 Ten-Year Site Plan Demand-Side Management projections are consistent with the DSM Goals established by the Commission in Docket No. 040031-EG.

# **Capacity and Demand Forecast**

PEF's forecasts of capacity and demand for the projected summer and winter peaks are shown in Schedules 7.1 and 7.2, respectively. PEF's forecasts of capacity and demand are based on serving expected growth in retail requirements in its regulated service area and meeting commitments to wholesale power customers who have entered into supply contracts with PEF. In its planning process, PEF balances its supply plan for the needs of retail and wholesale customers and endeavors to ensure that cost-effective resources are available to meet the needs across the customer base. Over the years, as wholesale markets have grown more competitive, PEF has remained active in the competitive solicitations while planning in a manner that maintains an appropriate balance of commitments and resources within the overall regulated supply framework.

# Base Expansion Plan

PEF's planned supply resource additions and changes are shown in Schedule 8 and are referred to as PEF's Base Expansion Plan. This Plan includes a net gain in summer capacity of 3,575 MWs through the summer of 2016. As identified in Schedule 8, PEF's next planned unit is the Hines 4 Unit, a 461 MW (summer) power block with a December 2007 in-service date. PEF's self-build option for Hines Unit 4 was determined to be the most cost-effective alternative, followed by the Bartow Repowering Project to be completed by June 2009.

PEF's Base Expansion Plan projects the need for additional units with proposed in-service dates from 2007 through 2016. These units, together with the OUC purchase (December 2006 – February 2007), the Central Power & Lime purchase (December 2005 - December 2010), the Reliant/Osceola purchase (January 2007 - February 2009), the TEA purchase (from January 2007 - February 2007, and June 2007 - September 2007), purchases currently under negotiation for the summers of 2007 and 2008, the Shady Hills Purchase (April 2007 - April 2024), and the Southern Company Purchase (June 2010 - December 2017) help the PEF system meet the growing energy requirements of its customer base. Additionally, some undesignated seasonal purchases for 2007 and 2008 are projected as well to meet requirements. Some of the identified unit additions may be impacted by PEF's ability to extend or replace existing purchase power contracts, as well as contracts with cogenerators and QF's. Status reports and specifications for new generation facilities are included in Schedule 9. Shown in Schedule 10 are the new transmission lines associated with Hines #4 and the Bartow Repowering Project.

Current planning studies identify gas-fired units as the most economic alternatives for system expansion in the near term. New nuclear technologies appear to offer more favorable long-term economics, and provide favorable environmental characteristics, measured against possible emission limits imposed by the recently issued Clean Air Interstate Rule (CAIR). PEF is currently evaluating the nuclear option with the intent of pursuing preliminary licensing activities for the addition of new nuclear capacity in 2016. In the years prior to the addition of new nuclear capacity, PEF also is investigating the possibility of coal gasification as a fuel source for one of the combined cycle facilities listed in the resource plan.

# TABLE 3.1

# PROGRESS ENERGY FLORIDA

# TOTAL CAPACITY RESOURCES OF POWER PLANTS AND PURCHASED POWER CONTRACTS

# AS OF DECEMBER 31, 2006

PLANTS	NUMBER OF UNITS	SUMMER NET DEPENDABLE CAPABILITY (MW)	
Nuclear Steam			
Crystal River	$\frac{1}{1}$	$\frac{769}{100}$ (1)	
Total Nuclear Steam	1	769	
Fossil Steam			
Crystal River	4	2,313	
Anclote	2	1,005	
Bartow	3	444	
Suwannee River	<u>3</u>	$\frac{141}{1}$	
Total Fossil Steam	12	3,903	
Combined Cycle			
Hines Energy Complex	3	1,456	
Tiger Bay	$\frac{1}{4}$	203	
Total Combined cycle	4	1,659	
Combustion Turbine		<i>c</i> 10	
DeBary	10	643	
Intercession City	14	992 (2)	
Bayboro	4	177	
Bartow	4	176	
Suwannee	3	157	
Turner	4	150	
Higgins	4	110	
Avon Park	2	50	
University of Florida	1	45	
Rio Pinar	1	$\frac{13}{12}$	
Total Combustion Turbine	47	2,513	
Total Units	64		
Total Net Generating Capability		8,844	
<ol> <li>Adjusted for sale of approximately 8.29</li> <li>Includes 143 MW owned by Georgia Page</li> </ol>	% of total capacity ower Company (Jun-Sep)		
Purchased Power		010	
Qualifying Facility Contracts	19	813	
Investor Owned Utilities	2	484	
Independent Power Producers	2	611	
TOTAL CAPACITY RESOURCES		10,752	

# TABLE 3.2

# PROGRESS ENERGY FLORIDA

# **QUALIFYING FACILITY GENERATION CONTRACTS**

# AS OF DECEMBER 31, 2006

Facility Name	Firm Capacity (MW)
Bay County Resource Recovery	11.0
Cargill	15.0
Dade County Resource Recovery	43.0
El Dorado	114.2
Lake Cogen	110.0
Lake County Resource Recovery	12.8
LFC Jefferson	8.5
LFC Madison	8.5
Mulberry	79.2
Orange Cogen (CFR-Biogen)	74.0
Orlando Cogen	79.2
Pasco Cogen	109.0
Pasco County Resource Recovery	23.0
Pinellas County Resource Recovery 1	40.0
Pinellas County Resource Recovery 2	14.8
Ridge Generating Station	39.6
Royster	30.8
TOTAL	812.6

# SCHEDULE 7. I FORECAST OF CAPACITY, DEMAND AND SCHEDULED MAINTENANCE AT TIME OF SUMMER PEAK

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
	TOTAL	FIRM	FIRM		TOTAL	SYSTEM FIRM					
	INSTALLED	CAPACITY	CAPACITY		CAPACITY	SUMMER PEAK	RESERV	'E MARGIN	SCHEDULED	RESERV	Æ MARGIN
	CAPACITY	IMPORT	EXPORT	QF	AVAILABLE	DEMAND	BEFORE M	IAINTENANCE	MAINTENANCE	AFTER M	AINTENANCE
YEAR	MW	MW	MW	MW	MW	MW	MW	% OF PEAK	MW	MW	% OF PEAK
2007	8,701	1,661	• 0	803	11,165	9,327	1,838	20%	Û	1,838	20%
2008	9,175	1,503	• 0	799	11,477	9,525	1,952	20%	٥	1,952	20%
2009	9,881	1,095	0	659	11.635	9,553	2,082	22%	0	2,082	22%
2010	9,891	1,253	Q	775	11,919	9,801	2.118	22%	0	2,118	22%
2011	9,926	1,370	0	775	12,071	9,992	2,079	21%	0	2,079	21%
2012	10,077	1,530	0	775	12,382	10,173	2,209	22%	0	2,209	22%
2013	10,614	1,530	0	665	12.809	10,379	2,430	23%	٥	2,430	23%
2014	11,151	1,530	0	478	13,159	10,711	2,448	23%	0	2,448	23%
2015	11,151	1,530	0	478	13,159	10,933	2,226	20%	0	2,226	20%
2016	12,276	1,459	0	478	14.213	11,169	3,044	27%	0	3,044	27%

• Progress Energy is pursuing summer seasonal purchases of approximately 200 MW in 2007 and 250 MW in 2008. The deals are not yet consummated as of the time of the Ten-Year Site Plan filling. Since the purchase is expected to be from peaking capacity, no energy impact has been included in the plan at this time.

Hearing ID# 28

	1110	v Abbuca	lition of item to under Order No. 14546				
Company	Order No.	Date	Project Description	Project Cost	Amortization Period	Estimated Savings Over Recovery Period	Ratio of Savings <u>to Costs Over</u> Recovery Period
FPL	PSC-96-1172-FOF-EI	09/19/96	Thermal Uprate of Turkey Point units 3 & 4	\$10 million	2-years	\$18.7 million	1.9
FPC	PSC-97-0359-FOF-EI	03/31/97	Conversion of peaking units to natural gas (DeBary 7, Bartow 3 & 4, Suwannee 1)	\$7.5 million	5-years	\$22 million	2.9
FPC	PSC-96-0353-FOF-EI	03/13/96	Conversion of combustion turbine units to natural gas (Intercession City CT units P8 and P10)	\$2.6 million	5-years	\$16 million	6.2
FPC	PSC-95-1089-FOF-EI	09/05/95	Conversion of combustion turbine units to natural gas (Intercession City CT units P7 and P9)	\$2.5 million	5-years	\$20 million	8.0
FPC	PSC-98-0412-FOF-EI	03/20/98	Conversion of Suwannee 3 to natural gas	\$2.45 million	5-years	\$3.25 million	1.3

	 r		T	T		
PEF		CR3 Uprate Project	\$381.8 million	10-years	\$1,020.2 million	2.7

Source: Relevant Orders per Javier Portuondo July 19, 2007 Rebuttal Testimony, pages 20-21.

FLORIDA DOCKET N	PUBLIC S	SERVICE CO	MMISSION 28	
COMPANY	GEF	-		_
WITNESS	Pripe As	plication of	= Item IC	under Order Ni
DATE	08	07408	107	_ 14546
			· · · · · · · · · · · · · · · · · · ·	

FLORIDA	PUBLIC SERVICE COMMISSION
COMPANY	PEF
WITNESS	Excel Spread Sheet Showing AFUT
DATE	08/07+08/07

#### Docket 070052 PEF Response OPC Interrogatory No. 12 Attachment 1 Page 1 of 2

#### Crystal River 3 Uprate NPV Analysis - For Discussion Purposes Only

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Retail Return on rate base (pretax)

13.19%

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	EST	EST	EST	EST	EST	EST	EST	EST	EST	EST	EST	EST	EST	EST	EST	EST	EST	EST	EST	EST	EST	EST	EST	EST	EST	EST	EST	EST	EST	EST
lant Mods	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
ing Balance		2.09	6.45	6.45	6.45	6.45	6.45	6,45	6.45	6.45	6.45	6.45	6.45	6.45	6.45	6.45	6.45	6.45	6,45	6.45	6.45	6.45	6.45	e 16	e 15	c. 17	c .r			
estment	2.09		0.45	0.4J	0.45	0.45	0.45	0.45	0.4J	0.45	0.45	0.40	0,40	0.40	0.40	0.45	0.45	0.43	0,45	0.43	0.40	0.40	0.40	6.45	6.45	6.45	6.45	6.45	6.45	6.45
tirements	2.09		- 0	- 0	. 0	. 0	- 0	. 0	- 0	- 0		- 0	- 0				- 0	- 0	- 0	- 0	- 0	- 0	- 0	•	-		-	-	• .	-
Balance	2.09	• •		6.45	6.45	6,45	6.45	6.45	6.45	6.45	6,45	0	0	0	0	0	<u> </u>				0		0	0	0	0	0	0	0	
			6.45	or (****								6.45	6.45	6.45	6.45	6.45	6.45	6.45	6.45	6.45	6.45	6.45	6.45	6.45	6.45	6.45	6.45	6.45	6.45	6.45
Balance	1.04	4.27	6.45	6.45	6.45	6.45	6.45	6.45	6.45	6.45	6.45	6.45	6.45	6.45	6.45	6.45	6,45	6.45	6.45	6.45	6.45	6.45	6.45	6,45	6.45	6.45	6.45	6.45	6.45	6.45
ation Rate			1.0000																											
ation Expense	-	-	6.45	-	-	-		-	-	-	-	•	-	-	•	-	-	-	-	-	•	•	-	-	-	-	-	-	-	-
etirements	•	-	-	-	-	• .	•	-	-	•	•	-	-	-	-	-	-	-	-	-	-		-	-	-	-	-	-	-	-
ng Balance Depreciation	-	-	•	6.45	6.45	6.45	6.45	6.45	6.45	6.45	6.45	6.45	6.45	6.45	6.45	6.45	6,45	6,45	6.45	6.45	6.45	6.45	6.45	6.45	6.45	6.45	6.45	6.45	6.45	6.45
Balance Depreciation		<u> </u>	6.45	6.45	6.45	6.45	6.45	6.45	6.45	6.45	6.45	6.45	6.45	6.45	6.45	6.45	6.45	6.45	6.45	6.45	6.45	6.45	6.45	6.45	6,45	6.45	6.45	6.45	6.45	6.45
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Plant																														
ng Balance	•	1.04	13.67	32.64	87,77	87.77	87.77	87.77	87.77	87.77	87.77	87.77	87.77	87.77	87.77	87.77	87.77	87.77	87.77	87.77	87.77	87.77	87.77	87.77	87.77	87.77	87.77	87.77	87.77	87.77
estment	1.04	12.63	18.97	55.12	-	-	-	-	-	-	-	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
lirements			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Balance	1.04	13.67	32.64	87.77	87.77	87.77	87.77	87.77	87.77	87.77	87.77	87.77	87.77	87.77	87.77	87,77	87,77	87,77	87.77	87.77	87,77	87.77	87.77	87.77	87.77	87,77	87.77	87.77	87.77	87.77
Balance	0.52	7.36	23.16	60.20	87.77	87.77	87.77	87.77	87.77	87.77	87.77	87.77	87.77	87.77	87.77	87.77	87.77	87.77	87.77	87.77	87.77	87.77	87,77	87.77	87.77	87.77	87.77	87.77	87.77	87.77
ation Rate				0.0083	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.0917															01.17	01.11
ation Expense	-	-	-	0.73	8.78	8,78	8.78	8.78	8.78	8.78	8.78	8.78	8.78	8.05		-			-	-	-									
direments	-	-		-	-	-	-	-	-	-	-					-										_		-		
ng Balance Depreciation	-	-	-	-	0.73	9.51	18.28	27.06	35.84	44.61	53.39	62.17	70.94	79.72	87.77	87.77	87.77	87.77	87.77	87.77	87,77	87.77	87.77	87.77	87.77	87.77	87 77	87.77	87.77	87.77
Balance Depreciation				0.73	9.51	18.28	27.06	35.84	44.61	53,39	62.17	70.94	79.72	87.77	87.77	87.77	87,77	87,77	87.77	87.77	87.77	87.77	87.77	87.77	87 77	87.77	87.77	87.77	87.77	87.77
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2 Plant																														
ing Balance	-	2.09	31.52	55.21	85.19	134.54	198.72	198.72	198.72	198.72	198.72	198.72	198.72	198.72	198.72	198.72	198.72	198.72	198.72	198.72	198.72	198.72	198.72	198.72	198.72	198.72	198.72	198.72	198.72	198.72
estment	2.09		23.69	29.98	49.35	64.18	-	-	-	-	-	•	-	-	-		-	•	-	-	-		-	-		-	-	-	-	-
tirements			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Balance	2.09	31.52	55.21	85.19	134.54	198.72	198.72	198.72	198.72	198,72	198.72	198.72	198.72	198.72	198.72	198.72	198.72	198.72	198.72	198.72	198,72	198.72	198.72	198.72	198.72	198.72	198.72	198.72	198.72	198.72
e Balance	1.04	16.80	43.37	70.20	109.86	166.63	198.72	198.72	198.72	198.72	198.72	198.72	198.72	198.72	198.72	198.72	198.72	198.72	198.72	198.72	198.72	198.72	198.72	198.72	198.72	198.72	198.72	198.72	198,72	198.72
ation Rate						0.016667	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.083333														
iation Expense	-	-		-		3.31	19.87	19.87	19.87	19.87	19.87	19.87	19.87	19,87	19.87	16.56			-			-	-	-		-	-		-	
tirements		-	-	-	-	-	-	-	-	-		-	-					-	-	-	-		-		-	-	-			
ng Balance Depreciation	-	-	-	-	-	-	3.31	23.18	43.06	62.93	82.80	102.67	122.55	142.42	162.29	182.16	198.72	198.72	198.72	198,72	198.72	198.72	198.72	198.72	198,72	198.72	198.72	198.72	198.72	198.72
Balance Depreciation			-			3,31	23.18	43.06	62.93	82.80	102.67	122.55	142.42	162.29	182.16	198.72	198.72	198.72	198.72	198.72	198.72	198,72	198.72	198.72	198.72	198.72	198.72	198.72		198.72
<u>ant</u>																														
ng Balance	-	-	-	4.31	24.60	42.69	51.16	51.16	51.16	51,16	51.16	51.16	51.16	51.16	51.16	51.16	51.16	51.16	51.16	51.16	51.16	51.16	51.16	51,16	51.16	51.16	51,16	51.16	51,16	51.16
stment	-	-	4,31	20.29	18,10	8.47	-	-	-	-	-	-	-	-		-	-	-	-	-	-	-		-		-	-	-	-	-
irements		0 0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Balance		•	4.31	24.60	42.69	51.16	51.16	51.16	51.16	51.16	51.16	51.16	51.16	51.16	51.16	51.16	51,16	51.16	51.16	51.16	51.16	51.16	51.16	51.16	51,16	51.16	51.16	51,16	51.16	51,16
Balance	-	-	2.15	14.45	33,64	46.93	51.16	51,16	51,16	51.16	51.16	51.16	51.16	51,16	51.16	51.16	51.16	51,16	51,16	51.16	51.16	51,16	51,16	51.16	51,16	51,16	51.16	51.16	51.16	51.16
ation Rate						0.016667	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1		0.083333	01.10	01.10	01.10	57.10	51.10	51.10	01.10	51.10	51.10	51.10	J1.10	JT. 10	JT. 10	<b>JI</b> ,10
ation Expense						0,85	5.12	5.12	5,12	5.12	5,12	5.12	5.12	5.12	5.12	4.26														
tirements	-				-	0,00	3.12	3.12	5.12	3.12	5.12	J. 12	J. 12	J. 12	J. 12	4.20	-	-	-	-	-	-	-	-	-	-		-	-	-
ng Balance Depreciation					-	-	0.85	5.97	11.08	16.20	21.32	26.43	31.55	36.66	41.78	46.90	51.16	51,16	51.16	- 51.16	51.16	- 51.16		-	FA 40	-	-		-	-
Balance Depreciation						0.85	5.97	5.97	16.20	21.32	26.43	20.43	31.55	41.78	41.78	46.90	51.16	51,16	51.16	51.16	51.16	51.16	51.16 51.16	51.16 51.16	51.16 51.16	51.16 51.16	51.16	51.16	51.16	51,16
CONTRACTION OF THE OWNER OWNER OF THE OWNER	-	-	-	-	-	0.00																					51.16	51.16	51.16	51.16

Docket No. 070052-EI Javier Portunondo Late – Filed Deposition Exhibit 3 05-23-07 Pagé 10f

#### Docket 070052

# PEF Response OPC Interrogatory No. 12

Attachment 1 Page 2 of 2

Iransmission Equip Beginning Balance Add Investment Less Retirements Ending Balance Average Balance Depreciation Rate Depreciation Expense Less Retirements Beginning Balance Depreciation Ending Balance Depreciation		4.30 0 4.30 2.15	4.30 9.25 0 13.55 8.93	13.55 19.42 0 32.97 23.26	32.97 40.37 0 73.34 53.15	73.34 30.56 0 103.90 88.62 0.016667 1.73 - 1.73	103.90 0 103.90 103.90 0.1 10.39 1.73 1.73 12.12	103.90 103.90 103.90 0.1 10.39 - 12.12 22.51	103.90 0 103.90 0.1 103.90 0.1 10.39 - 22.51 32.90	103.90 103.90 103.90 0.1 10.39 32.90 43.29	103.90 103.90 103.90 0.1 10.39 	103.90 0 103.90 103.90 0.1 10.39 - 53.68 64.07	103.90 0 103.90 103.90 0.1 10.39 - 64.07 74.46	103.90 0 103.90 103.90 0.1 10.39 - 74.46 84.85	103.90 0 103.90 103.90 0.1 10.39 - 84.85 95.24	103.90 0 103.90 103.90 0.083333 8.66 95.24 103.90	103.90 0 103.90 103.90 - 103.90 103.90	103.90 0 103.90 103.90 103.90 - 103.90 103.90	103.90 0 103.90 103.90 103.90 103.90 103.90	103.90 0 103.90 103.90 - 103.90 103.90	103.90 0 103.90 103.90 103.90 103.90	103.90 0 103.90 103.90 103.90 103.90	103.90 0 103.90 103.90 103.90 103.90 103.90	103.90 0 103.90 103.90 103.90 103.90	103.90 0 103.90 103.90	103.90 0 103.90 103.90 103.90 103.90	103.90 0 103.90 103.90 103.90 - 103.90	103.90 0 103.90 103.90 103.90 - - - - - - - - - - - - - - - - - - -	103.90 0 103.90 103.90 103.90 103.90	103.90 0 103.90 103.90 - 103.90 103.90	103.90 0 103.90 103.90 103.90 103.90
<u>Total Depreciation</u> Total Depreciation Expense Total End Balance Depreciation	-		6.45 6.45	0.73 7.18	8.78 15.96	14,67 30.63	44.15 74.79	<b>44</b> .15 118.94	44.15 163.10	44.15 207.25	44.15 251.41	44.15 295.56	44.15 339.72	43.42 383.14	35.38 418.52	29.48 448.00	448.00	- 448.00	448.00	448.00	448.00	448.00	448.00	448.00	448.00	- 448.00	448.00	448.00	- 448.00	448.00	448.00
Return Beginning Plant In Service Ending Plant In Service Average Investment Rate of Return Return on Investment	13.19%	6.45 3.23 13.19% -	6.45 3.23 13.19% 0.43	87.04 43.52 13.19% 0.96	87.04 78.26 82.65 13.19% 10.91	78.26 417.37 247.81 13.19% 17.40	417.37 373.21 395.29 13.19% 52.14	373.21 329.06 351.14 13.19% 46.31	329.06 284.90 306.98 13.19% 40.49	284.90 240.75 262.83 13.19% 34.67	240.75 196.59 218.67 13.19% 28.84	196.59 152.44 174.52 13.19% 23.02	152.44 108.28 130.36 13.19% 17.19	108.28 64.86 86.57 13.19% 11.42	64.86 29.48 47.17 13.19% 6.22	29.48 14.74 13.19% 1.94	13.19%	13.19%	13.19%	- - 13.19%	13.19%	13.19%	- - 13.19%	- - 13.19%_	- 13.19%	- - 13.19%	13.19%	13.19%	13.19%	13.19%	13.19%
Deferred Tax Impact Tax Depr Exp MUR Tax Depr Exp Phase 1 Tax Depr Exp Phase 2 Plant Trans & POD Total Tax Depr Exp		-	0.32	0.61 4.39 5.00	0.55 8.34 8.89	0.50 7.50 9.94 5.81 23.75	0.45 6.75 18.88 11.19 37.27	0.40 6.08 16.99 10.35 33.83	0.38 5.47 15.29 9.58 30.72	0.38 5.18 13.76 <u>8.86</u> 28.19	0.38 5.18 12.39 8.19 26.14	0.38 5.18 11.73 7.58 24.88	0.38 5.18 11.73 7.01 24.31	0.38 5.18 11.73 6.92 24.22	0.38 5.18 11.73 6.92 24.22	0.38 5.18 11.73 6.92 24.22	0.38 5.18 11.73 6.92 24.22	0.19 5.18 11.73 6.92 24.03	2.59 11.73 6.92 21.24	11.73 6.92 18.65	5.87 6.92 12.79	6.92 6.92	6.92 6.92	6.92 6.92	6.92	- - 3.46 3.46	-		-	-	-
Difference B/I Tax & Book Deferred Tax Assel/Liab Deffered Tax Assel/Liab Impact on Rev Reg's			6.13 2.39 0.32	(4.27) (1.66) (0.22)	(0.11) (0.04) (0.01)	(9.08) (3.54) (0.47)	6.88 2.68 0.35	10.33 4.03 0.53	13.43 5.24 0.69	15.97 6.22 0.82	18.01 7.02 0.93	19.28 7.51 0.99	19.85 7.73 1.02	19.21 7.49 0.99	11.16 4.35 0.57	5.27 2.05 0.27	(24.22) (9.44) (1.25)	(24.03) (9.36) (1.24)	(21.24) (8.28) (1.09)	(18.65) (7.27) (0.96)	(12.79) (4.98) (0.66)	(6.92) (2.70) (0.36)	(6.92) (2.70) (0.04)	(6.92) (2.70) (0.36)	(6.92) (2.70) (0.36)	(3.46) (1.35) (0.18)	-		-	-	-
Revenue Requirements Depreciation Expense Return on Investment O&M Aux Power DTA Rev Req Less: Depreciation in Base Rates - Retired Plant Total Revenue Requirement		-	6.45 0.43 - 0.32 - 7.20	0.73 0.96 	8.78 10.91 (0.01) 19.68	14.67 17.40 - (0.47) 31.60	44.15 52.14 0.38 0.83 0.35 97.85	44.15 46.31 0.39 0.72 0.53 92.11	44.15 40.49 0.40 0.71 0.69 86.44	44.15 34.67 0.41 0.77 0.82 80.82	44.15 28.84 0.42 0.76 0.93 75.10	44.15 23.02 0.43 0.83 0.99 69.43	44.15 17.19 0.44 0.83 1.02 63.65	43.42 11.42 0.45 0.92 0.99 57.21	35.38 6.22 0.47 1.05 0.57 43.69	29.48 1.94 0.48 1.12 0.27 33.29	0.49 1.05 (1.25) 0.29	0.51 1.03 (1.24)	0.52 1.09 (1.09) 0.52	0.54 1.21 (0.96) 0.79	0.55 1.15 (0.66) 1.04	0.57 1.18 (0.36) 1.39	0.58 1.21 (0.04) 1.76	0.60 1.24 (0.36) 1.48	0.61 1.28 (0.36) 1.53	0.63 1.31 (0.18) 1.76	0.65 1.34 - 1.98	0.67 1.37 -	0.68 1.40 - 2.08	0.70 1.43 2.13	0.72 1.46 -
<u>Impact to Ratepayer</u> Annual Fuel Savings Annual Fuel Savings Net of Rev Req's	-		7.91 0.71	6.31 4.84	20.24 0.56	25.87 (5.73)	96.63 (1.22)	85.47 (6.64)	88.54 2.10	84.26 3.44	96.31 21.21	93.78 24.35	96.86 33.22	98.99 41.78	114.15 70.46	104.87 71.58	108.42 108.13	102.26 101.96	113.07 112.55	114.07 113.28	108.31 107.27	108.92 107.53	109.49 107.73	110.02 108.54	110.53 109.00	111.01 109.25	111.47 109.48	111.90 109.87	112.32 110.24		113.10 110.92
NPV of Gross Fuel Savings NPV of Benefit to Ratepayer	\$706.23 \$352.62																														
NPV of Gross Fuel Savings (Retail) NPV of Banefit to Ratepayer (Retail) NPV Cost (Retail)	\$639.844 \$319.471 \$320.373																														
Tax Depr Rates Years in Service Tax Depr Rate Plant (15 yr) Tax Depr Rate POD & Trans (20 yr)	<u> </u>	2 0.10 0.07	<u>3</u> 0.09 0.07	4 0.08 0.06	5 0.07 0.06	6 0.06 0.05	7 0.06 0.05	8 0.06 0.05	9 0.06 0.04	0.06 0.04	<u>11</u> 0.06 0.04	12 0.06 0.04	<u>13</u> 0.06 0.04	14 0.06 0.04	15 0.06 0.04	16 0.03 0.04	<u> </u>	<u>18</u> 0.04	<b>19</b>	<u>20</u> 0.04	<u>21</u> 0.02		23	24	25	26	27	28	29	30	. 31

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#### Progress Energy Announces 2007 Second-Quarter Results; Continues to See Strong Performance From Core Businesses

Highlights:

- Reports second-quarter GAAP loss of 0.75 per share, compared to a loss of 0.19 per share for the same period last year due primarily to losses from the final transactions associated with exiting the merchant energy segment
- Reports core ongoing earnings of \$0.59 per share, compared to \$0.47 per share for the same period last year due primarily to lower interest expense and lower income taxes
- Reaffirms 2007 core ongoing earnings guidance of \$2.70 to \$2.90 per share

RALEIGH, N.C., Aug. 8 /PRNewswire-FirstCall/ -- Progress Energy (NYSE: PGN) announced second-quarter net losses of \$193 million, or \$0.75 per share, compared with net losses of \$47 million, or \$0.19 per share, for the same period last year. The unfavorable quarter-over-quarter variance in GAAP net income is due primarily to losses incurred as part of the final transactions associated with exiting the merchant energy segment. Second- quarter ongoing earnings were \$166 million, or \$0.65 per share, compared to \$81 million, or \$0.33 per share, last year. The favorable quarter-over-quarter variance in ongoing earnings is due primarily to synthetic fuels operating results, lower interest expense and lower income tax expense. (See the discussion later in this release for a reconciliation of GAAP earnings per share to ongoing earnings per share.)

#### (Logo: http://www.newscom.com/cgi-bin/prnh/20020923/CHM008LOGO-c )

Core ongoing earnings for the second quarter of 2007, which exclude the ongoing earnings from the company's coal and synthetic fuels operations, were \$0.59 per share, compared with \$0.47 per share last year. The company benefited from lower interest expense and lower income taxes primarily due to the closure of certain tax years and positions related to divested subsidiaries. Favorable weather at Progress Energy Carolinas also contributed to quarter-over-quarter favorability.

"Our core businesses continued to perform well in the second quarter," said Bob McGehee, chairman and chief executive officer of Progress Energy. "With the sale of our energy contracts with the Georgia cooperatives we have completed the last major step in our plan to focus our capital and our attention on meeting the needs of our two growing utilities. We have completed this transition ahead of schedule. More important, the results of this initiative have produced a stronger balance sheet, enhanced credit ratings and have contributed to strong ongoing earnings growth. We believe these actions firmly support our investment objective of offering a reasonable total return with low volatility."

Non-core ongoing earnings for the second-quarter 2007 were \$0.06 per share, compared with losses of \$0.14 per share last year, primarily due to increased synthetic fuels sales.

#### PROGRESS VENTURES EXIT REVIEW

The company has closed on the last of the divestitures of assets within the Progress Ventures reporting segment. Over the past two years, the company sold its merchant energy related nonregulated power plants, natural gas assets and associated long-term power contracts. In total, these divestitures produced about \$1.7 billion of after-tax proceeds which were applied to debt reduction and other corporate purposes.

"This business was successfully exited while realizing a modest return on our invested capital," McGehee said.

#### 2007 CORE ONGOING EARNINGS GUIDANCE

"We've had a strong first half of the year and our core businesses continue to perform very well. We are confident in reaffirming our 2007 core ongoing earnings guidance of \$2.70 to \$2.90 per share," McGehee said.

The 2007 core ongoing earnings guidance excludes any impacts from the CVO mark-to-market adjustment, potential impairments, coal and synthetic fuels operations and discontinued operations of other businesses. Progress Energy is not able to provide a corresponding GAAP equivalent for the 2007 earnings guidance figures due to the uncertain nature and amount of these adjustments.

#### 2007 NON-CORE EARNINGS

The company expects earnings from our non-core businesses to be between \$0.30 and \$0.40 per share with oil prices and production levels being the primary determining factors. However, due to the anticipated conclusion of the synthetic fuels production program at the end of 2007, virtually all of these earnings are likely to be reclassified to discontinued operations and excluded from ongoing earnings results later this year. Based on the latest estimates, the company expects to have in excess of \$900 million of deferred tax credits when the synthetic fuels program concludes at the end of this year.

#### RECENT DEVELOPMENTS

- -- Comprehensive energy bill passed in North Carolina; presented to governor to sign into law.
- -- Received order from the Florida Public Service Commission to refund \$13.8 million of previously collected fuel costs plus interest (the company is considering options).
- Closed on the sale of remaining nonregulated power plants, hedges and contracts in Progress Ventures.
- -- Selected Westinghouse AP1000 reactor technology for potential nuclear plant site in Levy County, Fla.
- -- Kicked off the Save the Watts energy efficiency and conservation campaign.
- Signed long-term contract for 75 MW of electricity generated by what will be the largest wood waste biomass plant in the nation.
- -- Issued a request for renewables to expand the company's renewable portfolio and provide cost effective renewable energy to Progress Energy Florida customers.
- -- Announced 2,000 MW energy-efficiency goal for Progress Energy

# FLORIDA PUBLIC SERVICE COMMISSION DOCKET NO. 070052-EIEXHIBIT 30 COMPANY PEF WITNESS Second Quarter Results DATE DB 0700807