

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

In re: Petition of Progress Energy Florida, Inc. for approval of an Accounting Order to record a depreciation expense credit.

DOCKET NO. 10 0136 -EI
Submitted for filing:
March 18, 2010

DIRECT TESTIMONY OF
JOHN B. CRISP

On behalf of PROGRESS ENERGY FLORIDA

COM 5
APA 7
ECR 7
GCL 2
RAD 1
SSC 1
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OPC 1
CLK 1

**In re: Petition of Progress Energy Florida, Inc. for approval of an Accounting
Order to record a depreciation expense credit.**

Docket No. 10 _____ -EI

**DIRECT TESTIMONY OF
JOHN B. CRISP**

1 **I. Introduction and Summary.**

2 **Q. Please state your name and business address.**

3 A. My name is John Benjamin (Ben) Crisp. My business address is 6565 38th
4 Avenue North, St. Petersburg, Florida 33710.

5
6 **Q. By whom are you employed and in what capacity?**

7 A. I am employed by Progress Energy Florida, Inc. ("PEF" or the "Company") as the
8 Director of System Planning and Regulatory Performance for PEF.

9
10 **Q. Please describe your duties and responsibilities.**

11 A. My responsibilities include the development and implementation of energy system
12 expansion plans and generation optimization plans for PEF. These expansion and
13 optimization plans, otherwise known as integrated resource plans ("IRPs"), include
14 detailed review and analysis of system load forecasts, and the corresponding
15 determination of supply-side, demand-side and grid infrastructure resources
16 available to meet the load requirements identified in the system load forecasts. The
17 supply-side, demand-side, and grid infrastructure resources include assets currently
18 available on the existing system, and assets potentially available to the Company

1 over its planning horizon. These analyses result in recommended action to the
2 Company's management for asset changes or additions that fulfill the Company's
3 obligation to serve.
4

5 **Q. Please summarize your educational background and employment experience.**

6 **A.** I attended the Georgia Institute of Technology in Atlanta, Georgia, where I received
7 a Bachelor of Science degree in Industrial and System Engineering. I have more
8 than twenty years of electric utility experience in generation, transmission, and fuels
9 planning, load forecasting, generation construction, power plant operation, system
10 operations, fuels and power trading, and energy efficiency systems.

11 I have worked for both regulated and unregulated utilities in a variety of
12 management positions. My management responsibilities with PEF have included
13 system dispatch, load and energy forecasting, integrated resource planning, and
14 energy efficiency programs. In my current management positions, and in my
15 previous ones, I have provided testimony to several different state regulatory bodies,
16 including the Florida Public Service Commission ("FPSC" or the "Commission"),
17 on issues involving load forecasts and the most cost-effective means for utilities to
18 meet their obligation to serve the respective load forecast.
19

20 **Q. What is the purpose and summary of your testimony?**

21 **A.** The purpose of my testimony is to describe the development and results of PEF's
22 updated load forecast that supports the Company's accounting order petition. As I
23 use the term "load forecast" in my testimony, I mean the Company's individual

1 projections of customers, energy sales, and coincident peak demand. To summarize
2 my testimony, PEF's updated load forecast, prepared in the normal course of PEF's
3 business operations in December 2009, demonstrates that PEF will experience fewer
4 retail customers and lower retail sales in 2010 than previously forecasted by the
5 Company, as the declining retail customers and sales PEF experienced in 2009
6 continues in 2010.

7
8 **Q. Have you prepared any exhibits to your testimony?**

9 **A.** Yes, I have prepared or supervised the preparation of several exhibits, as follows:

- 10 • Exhibit No. ____ (JBC-1), PEF's 2010 Customer Energy Sales & Seasonal
11 Demand Forecast;
- 12 • Exhibit No. ____ (JBC-2), PEF's Annual Customer Growth Review Average
13 Annual Billed Accounts 2009 vs. 2008;
- 14 • Exhibit No. ____ (JBC-3), PEF Forecast Comparison: 2010 Forecast Retail
15 Customer and Energy Sales vs. October 2008 Forecast Retail Customer and
16 Energy Sales;
- 17 • Exhibit No. ____ (JBC-4), PEF Total Retail Customer Growth Year over
18 Year Chart for 2008-2009 actual, October 2008 forecast, and December
19 2009 forecast;
- 20 • Exhibit No. ____ (JBC-5), Residential KWH/Customer Table for actual and
21 weather adjusted 2009 use compared to October 2008 forecast;

- 1 • Exhibit No. ____ (JBC-6), Residential KWH Use Per Customer Chart for
- 2 2007-2009 actual and weather normalized, the October 2008 load forecast,
- 3 and the December 2009 load forecast;
- 4 • Exhibit No. ____ (JBC-7), PEF Forecast Performance Billed MWH Sales
- 5 Actual & Weather Adjusted 2009 vs. Rate Case Forecast;
- 6 • Exhibit No. ____ (JBC-8), PEF Retail MWH Sales 12 Month Ending Chart
- 7 for 2008-2009 Actual and Weather Adjusted, October 2008 Forecast, and
- 8 December 2009 Forecast;
- 9 • Exhibit No. ____ (JBC-9), PEF Historical Forecast Accuracy: Actual and
- 10 Prior year Forecasts 1990-2009;
- 11 • Exhibit No. ____ (JBC-10), PEF's Historic Retail Peak Demands including
- 12 2009 and January 2010;
- 13 • Exhibit No. ____ (JBC-11), PEF's Forecast Process Flow Chart; and
- 14 • Exhibit No. ____ (JBC-12), PEF's Energy and Customer Forecasting
- 15 Modelings including U.S. and Florida Economic Input Assumptions
- 16 December 2009 Forecast.

17 These exhibits are true and accurate.

18
19 **II. PEF's 2010 Load Forecast.**

20 **Q. What is the purpose of a load forecast?**

21 A. The load forecast is used in both the Company's planning and budget processes.
22 The load forecast enables the Company to estimate the likely number of customers it
23 will serve in the future, the amount of electric energy it will sell to those customers,

1 and the time(s) at which the customers demand for electric energy will be greatest.
2 PEF must estimate or project how much energy its customers (old and new) will
3 consume in the future and when that consumption is likely to take place to serve
4 customers in a cost-effective and reliable manner. PEF must provide and maintain
5 the assets necessary to generate, transmit, and distribute electrical energy to its
6 customers during the course of the year and when customers need it the most each
7 year.

8
9 **Q. When did the Company prepare its load forecast?**

10 A. The Company prepared its updated 2010 load forecast in December 2009. This
11 forecast replaced the Company's May 2009 load forecast. The May 2009 load
12 forecast was an update of the Company's October 2008 load forecast that served as
13 the load forecast for the Company's base rate request in Docket No. 090079-EI.
14 Each of these load forecasts was prepared in the normal course of the Company's
15 business operations. The Company revises its load forecast on a regular basis to
16 account for the impact of current economic conditions on the Company's anticipated
17 future customer, energy, and peak demand by including the most recent economic
18 and demographic inputs available. The Company's updated forecast (customers,
19 energy sales, and demand) for 2010 is included as Exhibit No. __ (JBC-1) to my
20 testimony.

21
22 **Q. What are the results of PEF's updated load forecast for 2010?**

1 A. PEF will experience a loss of retail customers for the second straight year and even
2 lower energy use in 2010 than PEF projected for 2010 in its base rate proceeding in
3 Docket No. 090079-EI. In that docket, PEF originally expected to see a gradual
4 improvement in economic conditions in 2009 and 2010, and a corresponding small
5 increase in retail energy growth projections. Updated load forecasts in May 2009
6 and the December 2009 forecast indicate that the effects of the economic downturn
7 are more pronounced and longer lasting than previously expected. As a result, the
8 load forecast for 2010 shows that PEF will have fewer customers and lower energy
9 sales than were assumed in its most recent rate case.

10 To illustrate, since the filing of PEF's October 2008 load forecast in Docket
11 No. 090079-EI, there are 8,739 fewer retail customers on PEF's system in 2009 than
12 in 2008. See Exhibit No. ___ (JBC-2). PEF's October 2008 load forecast projected
13 an increase in retail customers from 2008 to 2009. PEF therefore had fewer
14 customers in 2009 than PEF projected. See Exhibit No. ___ (JBC-3). This decline
15 in retail customers continues in 2010. PEF projects in its updated load forecast that
16 it will serve on an average annual basis 656 fewer retail customers in 2010 than was
17 reported in the actual numbers for 2009 and significantly fewer customers in 2010
18 than PEF projected it would serve in its load forecast in Docket No. 090079-EI. See
19 Exhibit No. ___ (JBC-4).

20 Likewise, both actual and weather adjusted 2009 residential customer
21 average kWh use (i.e. average use per customer) were below what PEF estimated in
22 its load forecast in Docket No. 090079-EI. See Exhibit No. ___ (JBC-5).

23 Residential kWh use continues to decline in 2010. In fact, in PEF's updated load

1 forecast, energy use per customer falls dramatically below the level of use PEF
2 projected in its load forecast in Docket No. 090079-EI. See Exhibit No. ____ (JBC-
3 6). PEF retail sales are also declining. PEF retail customers used 1,191,554 less
4 megawatt hours in 2009 on a weather adjusted basis than PEF projected them to use
5 in the forecast PEF submitted in Docket No. 090079-EI. As a result, PEF's actual
6 2009 sales have significantly declined compared to the Company's load forecast in
7 its base rate proceeding. See Exhibit No. ____ (JBC-7). PEF expects continuing,
8 significant declines in sales and in revenues in 2010 under its updated load forecast
9 compared to its prior load forecast in Docket No. 090079-EI. See Exhibit No. ____
10 (JBC-8).

11 As a result, PEF begins 2010 with fewer retail customers and lower retail
12 sales than PEF expected. From this point, PEF now projects even fewer retail
13 customers and a further retail sales decline in 2010. This is in contrast to the
14 originally projected gradual improvement in sales beginning in 2009 and continuing
15 in 2010 included in the load forecast in PEF's base rate proceeding. The gradual
16 economic recovery PEF expected in 2009 and 2010 did not occur.

17
18 **Q. What are the resulting impacts on PEF?**

19 **A.** PEF's declining retail sales growth in 2010 means that retail revenues are declining
20 below the revenues projected in PEF's base rate proceeding based on PEF's prior,
21 higher load forecast in that docket. As explained in more detail in Mr. Javier
22 Portuondo's testimony, the result is that the projected revenue from 2010 retail sales

1 will not be sufficient to give PEF an opportunity to earn the return on equity
2 midpoint established for PEF in 2010 in Docket No. 090079-EI.

3
4 **Q. Can you explain how this result can occur based on the Company's load
5 forecast?**

6 **A.** Yes. Although PEF will serve fewer customers than expected in 2009 and 2010 and
7 produce less electricity, PEF will not experience a commensurate reduction in base
8 rate costs to provide service to its customers. PEF is still obligated to serve a retail
9 customer base that has grown from just over 1.1 million retail customers to over 1.6
10 million customers over the last two decades. See Exhibit No. ___ (JBC-9). Simply
11 put, more customers on the system mean more cost to serve them. PEF will
12 continue to incur costs to reliably provide electric service to these customers. Most
13 of those costs are fixed costs associated with long-lived capital assets, such as power
14 plants, transmission facilities, and distribution assets. For several reasons, the
15 Company cannot reduce those costs to track the anticipated reduction in retail sales
16 in 2010.

17 First, the bulk of those costs are associated with already existing assets, the
18 cost of which are already established and unavoidable. Second, the capital
19 investments that were projected for 2010 will not change materially as a result of the
20 reduction in customers and retail sales in 2010. The need for those investments is
21 based on the long term needs of the system and therefore is not likely to be affected
22 by shorter term changes in load forecasts. Finally, PEF is obligated to meet its
23 customer energy needs on demand. Thus, it is PEF's peak load demand that drives

1 much of its costs. Even though PEF will have lower retail sales in 2010 than
2 anticipated, PEF customers set new peak energy demand levels in January 2010 in
3 the midst of the current recession. See Exhibit No. ___ (JBC-10) to my testimony.
4 Note that actual weather conditions (year round and during peak demand periods)
5 affect reported system energy requirements and peak demands when compared with
6 the "weather normalized" basis in the energy and demand forecasts.

7 In sum, PEF continues to incur costs to serve its retail customer base and
8 meet their peak demand even with lower retail energy sales revenues in 2010 than
9 PEF projected in its load forecast filed in Docket No. 090079-EI. As explained by
10 Mr. Javier Portuondo, PEF's lower retail energy sales revenues are not covering the
11 fixed costs of providing service, including peak energy service, to PEF's customers
12 sufficient to provide PEF with an opportunity to earn the return on equity midpoint
13 established in Docket No. 090079-EI.

14
15 **III. Forecast Methodology.**

16 **Q. How was the Company's updated load forecast prepared?**

17 **A.** The Company's updated 2010 load forecast was prepared using the Company's
18 standard forecasting methodology. This is the same forecasting methodology that
19 the Company has consistently used for years and that this Commission has reviewed
20 and approved in prior base rate and other regulatory proceedings before the
21 Commission. It is also the same forecasting methodology that is used as part of the
22 Integrated Resource Planning (IRP) process that results in the preparation and filing
23 of the Company's Ten Year Site Plan each year with the Commission. The

1 Company's forecasting methodology is reviewed by the Commission each year
2 during the course of the Commission's determination that the Company's Ten Year
3 Site Plan is suitable.

4
5 **Q. Please provide us with an overview of the forecasting methodology used to**
6 **develop the load forecast.**

7 A. There are four main steps in the development of a load forecast: (1) the assembly of
8 the forecast assumptions, (2) the derivation of forecast model parameters, (3) the
9 calculation of the forecast, and (4) adjustments to the forecast based upon the
10 educated judgment of the forecaster. These steps are reflected in Exhibit No. ____
11 (JBC-11).

12 • **Assembly of the Forecast Assumptions.** The first step in any forecasting
13 procedure is to assemble a set of assumptions upon which the forecast is based. The
14 assumptions describe the forecaster's educated prediction about how the future will
15 unfold with respect to influences upon company energy sales, customer growth, and
16 system peak. In developing these assumptions, the forecaster relies in part on the
17 opinions of professional economists at Economy.Com, the University of Florida's
18 Bureau of Economic and Business Research ("BEBR"), as well as other sources.
19 Each of these groups develops forecasts of national and regional economic and
20 demographic data. These forecasts are purchased by the Company. Other
21 assumptions are derived from historical data like normal weather conditions. The
22 assumptions utilized in the Company's updated load forecast are set forth in Exhibit
23 No. ____ (JBC-12) to my testimony. It is important to note that in all cases the

1 assumptions made are based upon a "most-likely" forecast. Forecasted values of
2 these forecast assumptions become inputs to the forecast models that lead to
3 customer, energy and peak demand projections.

4 • **Derivation of Forecast Parameters.** Next, based on the assumptions, the
5 forecaster derives the parameters for the forecast model. The parameters of a
6 forecast model quantify the statistical relationship between the economic and
7 demographic environment impacting a utility service area and the latest energy
8 usage (and customer growth) patterns of its customers. These parameters are
9 updated each time a forecast is produced to ensure that the resulting forecasts reflect
10 current energy consumption patterns in the Company's service territory. In addition,
11 when deriving model parameters the forecaster incorporates (to the extent possible)
12 historical data from the ten most recent years into the model sample.

13 • **Development of the Forecast.** The forecaster then proceeds to develop the new
14 forecast. The Company's load forecast actually consists of three separate forecasts
15 as follows:

- 16 - a customer forecast
- 17 - an energy sales forecast
- 18 - a coincident-peak demand forecast (primarily used for resource
19 planning purposes)

20 *Customer forecast* – The Company's customer forecast (i.e., the number of
21 customers it expects to serve during the forecast period) is developed primarily from
22 county population projections produced by the University of Florida's Bureau of
23 Economic and Business Research. In a service area like PEF's, where nearly 98.4

1 percent of the Company's customers are residential and commercial customers,
2 these population projections serve as the best predictor of the Company's total
3 customers. This is because an increasing service area population translates directly
4 into a greater number of homes and commercial establishments to service these
5 homes. An annual econometric model is used to measure the historical relationship
6 between service area population and residential customer growth. The resulting
7 parameter becomes a "multiplier" that, when applied to the population growth
8 forecast, results in a projection of new residential customers. Once the residential
9 customer forecast is finalized, it is used as the "driving" variable in the commercial
10 customer regression model. The customer forecasts for the remaining retail sectors
11 are forecast using trend analysis because of their relatively stable historical patterns.

12 In producing the customer forecast, the Company used the most recent
13 BEBR update from March 2009 together with the October 2009 update from the
14 Florida Legislature's Office of Economic & Demographic Research "Demographic
15 Estimating Conference." PEF observed in this data declining year-over-year
16 customer growth reflecting the economic downturn experienced in the Florida
17 economy after 2006 and continuing through 2010. As a result of this data, PEF
18 adjusted its load forecast and currently projects negative retail customer growth for
19 2010. This is the second straight year the Company will lose retail customers
20 because there were fewer retail customers in 2009 than there were in 2008.

21 *Energy Sales Forecast* – The Company's energy sales forecast is developed using
22 monthly econometric models. These short-term models project monthly energy
23 sales by revenue class (residential, commercial, industrial, street lighting and public

1 authority) and require the forecaster to have a thorough understanding of each
2 variable to be projected (i.e., residential customer growth or average residential use
3 per customer) and the influences or events that create monthly variation or
4 movement in those variables. Sales are regressed using “driver” variables that best
5 explain monthly fluctuations over a sample period. For example, in order to project
6 average KWh energy usage per customer, driver variables such as weather and
7 economic conditions are utilized to capture the statistical relationship to changes in
8 kWh consumption per customer. This approach enables the forecaster to incorporate
9 the most recent historical data as well as the most current outlook on the economy.
10 The modeling specifications for each retail class energy model (and residential and
11 commercial customer models) are set forth in Exhibit No. ____ (JBC-12).

12 The results of the Company’s updated 2010 customer and energy sales
13 forecast are shown in Exhibit No. ____ (JBC-1). This forecast is an update of the
14 October 2008 load forecast used in Docket No. 090079-EI and conservatively
15 forecasts the Company’s expected customers, energy sales, and peak load in 2010.

16 *Coincident Peak Demand Forecast* – The coincident peak demand forecast
17 is developed using a disaggregation technique followed by econometrically
18 modeling several of the disaggregated components. The disaggregation technique
19 separates monthly system demand into four major components: potential firm retail
20 demand, nondispatchable and dispatchable direct load control (MW) capability,
21 sales for resale demand, and Company use. Each of the peak demand components is
22 then separately forecast and added arithmetically to the next or, in the case of
23 demand side management (“DSM”), subtracted, to arrive at total system firm peak

1 demand. The coincident peak demand forecast is fundamental in developing
2 planning projections for future grid and infrastructure additions and improvements
3 as well as for demand and supply side resource assessments. These forecasts are
4 based on forecasted "normal weather" conditions and are used to project the
5 Company's ability to meet peak customer demand conditions.

6 • **Forecaster's Judgment.** Finally, after all of the parts of the load forecast are
7 complete, the forecaster evaluates the cumulative modeling results and makes
8 adjustments as appropriate based on his or her professional judgment, as well as
9 such adjustments as may be reasonably necessary to capture the impact of events
10 that the model is unable to capture.

11 For example, econometric models develop parameters ("beta coefficients")
12 that are applied to projections of "driver" variables that are purchased from an
13 economic forecasting firm and may be three or more months old. Occasionally,
14 economic events unfold very rapidly and sometimes out-of-date projections are used
15 in the models. Even historical economic data get revised by government agencies
16 and can paint a picture that differs subtly from what is reflected in the original
17 economic data. When this occurs, the forecaster will incorporate the latest
18 information he or she understands is influencing company sales or customer growth
19 levels. Other times, events such as rate migrations may require special adjustments
20 to the rate schedule level forecast that cannot possibly be captured by an
21 econometric model.
22

1 **Q. Is the forecasting methodology used to develop the Company's 2010 load**
2 **forecast consistent with the load forecasting policy and practice you described?**

3 A. Yes, it is. As I explained earlier, PEF followed its standard forecasting methodology
4 in developing its load forecast. This forecasting methodology has been used for
5 years at PEF to forecast load with substantially accurate past results when actual
6 load is compared to prior forecasts, excluding anomalous, unpredictable events such
7 as the post-9/11 and current global financial crises. PEF's load forecasting
8 methodology is also consistent with generally accepted, utility industry standard
9 methodologies for load forecasts. As a result, PEF is confident that its load forecast
10 is a reasonably accurate projection of load in 2010.

11
12 **Q. Does this conclude your testimony?**

13 A. Yes.
14

PROGRESS ENERGY FLORIDA CORPORATION										
DECEMBER 2009 FORECAST SALES - CUSTOMERS - COINCIDENT DEMAND										
PROJECTED MONTHLY MWH ENERGY SALES - BILLING MONTH										
	YEAR	M	RESID	COML	INDUST	SHL	SPA	TOTAL RETAIL	TOTAL WHOLESALE	TOTAL SYSTEM
Actual	2009	1	1,376,272	884,071	271,809	2,207	245,271	2,779,630	384,579	3,164,209
Actual	2009	2	1,618,774	825,540	254,392	2,143	243,727	2,944,576	454,933	3,399,509
Actual	2009	3	1,291,802	844,403	264,504	2,202	236,832	2,639,743	308,344	2,948,087
Actual	2009	4	1,224,077	921,919	279,133	2,165	252,886	2,680,180	227,748	2,907,928
Actual	2009	5	1,462,910	970,271	271,886	2,140	261,537	2,968,744	223,258	3,192,002
Actual	2009	6	1,821,182	1,056,018	280,646	2,148	283,932	3,443,926	283,418	3,727,344
Actual	2009	7	2,046,571	1,160,785	292,424	2,166	282,035	3,783,981	380,914	4,164,895
Actual	2009	8	1,895,960	1,113,932	264,843	2,142	275,211	3,552,088	365,201	3,917,289
Actual	2009	9	1,962,189	1,129,981	306,550	2,153	307,957	3,708,830	372,081	4,080,911
Actual	2009	10	1,831,805	1,077,662	226,759	2,160	302,056	3,440,442	248,218	3,688,660
Actual	2009	11	1,620,816	1,014,437	324,306	2,167	291,644	3,253,370	291,106	3,544,476
Forecast	2009	12	1,311,076	889,072	244,175	2,164	250,226	2,696,713	309,678	3,006,391
	2009 (11+1F)		19,463,434	11,888,091	3,281,427	25,957	3,233,314	37,892,223	3,849,478	41,741,701
Forecast	2010	1	1,568,980	887,327	262,260	2,175	233,918	2,954,660	375,533	3,330,193
Forecast	2010	2	1,455,362	826,361	255,764	2,098	233,461	2,773,046	328,115	3,101,161
Forecast	2010	3	1,258,469	831,485	265,361	2,179	241,773	2,599,267	267,902	2,867,169
Forecast	2010	4	1,240,075	895,864	276,251	2,148	251,870	2,666,208	335,816	3,002,024
Forecast	2010	5	1,367,055	937,492	278,861	2,124	261,746	2,847,278	357,243	3,204,521
Forecast	2010	6	1,759,790	1,036,759	291,625	2,136	283,256	3,373,566	400,700	3,774,266
Forecast	2010	7	1,966,617	1,091,591	283,685	2,150	280,426	3,624,469	414,051	4,038,520
Forecast	2010	8	1,993,016	1,103,900	288,022	2,129	288,898	3,675,965	467,320	4,143,285
Forecast	2010	9	2,005,703	1,088,180	285,759	2,140	319,148	3,700,930	468,434	4,169,364
Forecast	2010	10	1,684,020	1,008,295	274,401	2,139	300,173	3,269,028	420,269	3,689,297
Forecast	2010	11	1,305,030	945,169	277,567	2,132	272,408	2,802,306	360,590	3,162,896
Forecast	2010	12	1,323,181	867,125	274,546	2,144	262,484	2,729,480	282,169	3,011,649
	2010 Budget		18,927,298	11,519,548	3,314,102	25,694	3,229,561	37,016,203	4,478,142	41,494,345
PROJECTED MONTHLY BILLED ACCOUNTS										
	YEAR	M	RESID	COML	INDUST	SHL	SPA	TOTAL RETAIL	TOTAL WHOLESALE	TOTAL SYSTEM
Actual	2009	1	1,427,104	161,720	2,515	1,642	23,273	1,616,254	23	1,616,277
Actual	2009	2	1,469,790	162,263	2,500	1,651	23,159	1,659,363	23	1,659,386
Actual	2009	3	1,431,072	160,340	2,458	1,631	23,157	1,618,658	23	1,618,681
Actual	2009	4	1,420,220	161,346	2,534	1,625	23,437	1,609,162	23	1,609,185
Actual	2009	5	1,430,327	159,537	2,485	1,622	23,156	1,617,127	23	1,617,150
Actual	2009	6	1,472,777	162,803	2,465	1,617	23,513	1,663,175	23	1,663,198
Actual	2009	7	1,437,857	162,340	2,524	1,618	23,479	1,627,818	22	1,627,840
Actual	2009	8	1,364,658	156,142	2,462	1,614	22,818	1,547,694	23	1,547,717
Actual	2009	9	1,423,116	159,941	2,454	1,612	23,227	1,610,350	23	1,610,373
Actual	2009	10	1,388,677	158,091	2,456	1,616	23,046	1,573,886	23	1,573,909
Actual	2009	11	1,598,157	172,922	2,577	1,624	24,582	1,799,862	22	1,799,884
Forecast	2009	12	1,437,184	160,618	2,462	1,611	23,363	1,625,238	21	1,625,259
	2009 Annual		1,441,745	161,505	2,491	1,624	23,351	1,630,716	23	1,630,738
Forecast	2010	1	1,439,862	160,673	2,461	1,609	23,297	1,627,902	22	1,627,924
Forecast	2010	2	1,441,697	160,605	2,460	1,607	23,236	1,629,605	21	1,629,626
Forecast	2010	3	1,443,220	160,565	2,459	1,605	23,312	1,631,161	21	1,631,182
Forecast	2010	4	1,441,562	160,329	2,458	1,603	23,285	1,629,237	21	1,629,258
Forecast	2010	5	1,440,806	160,450	2,457	1,601	23,334	1,628,648	21	1,628,669
Forecast	2010	6	1,440,301	160,622	2,456	1,599	23,263	1,628,241	21	1,628,262
Forecast	2010	7	1,440,763	160,715	2,455	1,597	23,213	1,628,743	21	1,628,764
Forecast	2010	8	1,441,484	160,969	2,454	1,595	23,246	1,629,748	21	1,629,769
Forecast	2010	9	1,440,553	161,015	2,453	1,593	23,289	1,628,903	21	1,628,924
Forecast	2010	10	1,440,497	161,115	2,452	1,591	23,304	1,628,959	21	1,628,980
Forecast	2010	11	1,442,915	161,328	2,451	1,589	23,243	1,631,526	21	1,631,547
Forecast	2010	12	1,443,092	161,094	2,450	1,587	23,291	1,631,514	21	1,631,535
	2010 Annual		1,441,396	160,790	2,456	1,598	23,276	1,629,516	21	1,629,537

**PEF ANNUAL CUSTOMER GROWTH REVIEW
AVERAGE ANNUAL BILLED ACCOUNTS
2009 VS. 2008**

<u>CLASS OF BUSINESS</u>	<u>ACTUAL</u> <u>2009</u>	<u>ACTUAL</u> <u>2008</u>	<u>DIFF</u>	<u>% DIFF</u>
RESIDENTIAL	1,441,325	1,449,041	-7,716	-0.5%
COMMERCIAL	161,390	162,569	-1,178	-0.7%
INDUSTRIAL	2,487	2,587	-101	-3.9%
ST & HIGHWAY	1,624	1,652	-28	-1.7%
<u>PUBLIC AUTHORITY</u>	<u>23,346</u>	<u>23,062</u>	<u>284</u>	<u>1.2%</u>
TOTAL RETAIL	1,630,172	1,638,911	-8,739	-0.5%

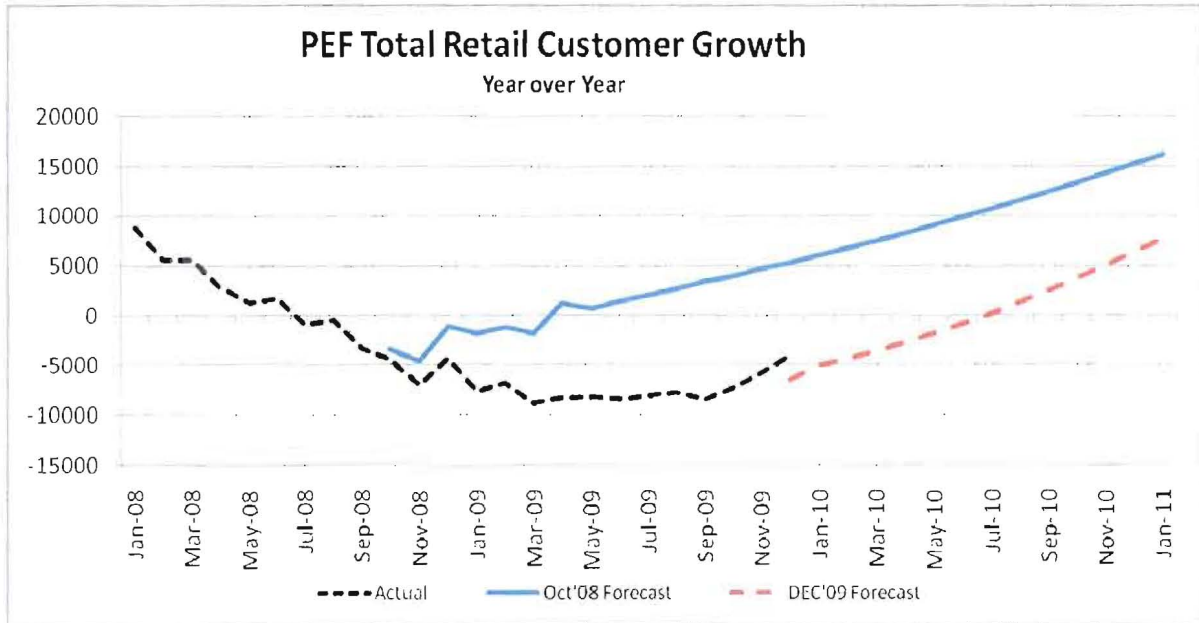
*Table 1 is NOT corrected for event-driven billing.

PEF Forecast Comparison for 2010

December 2009 Retail Customer and Energy Forecast vs. October 2008 Customer and Energy Forecast

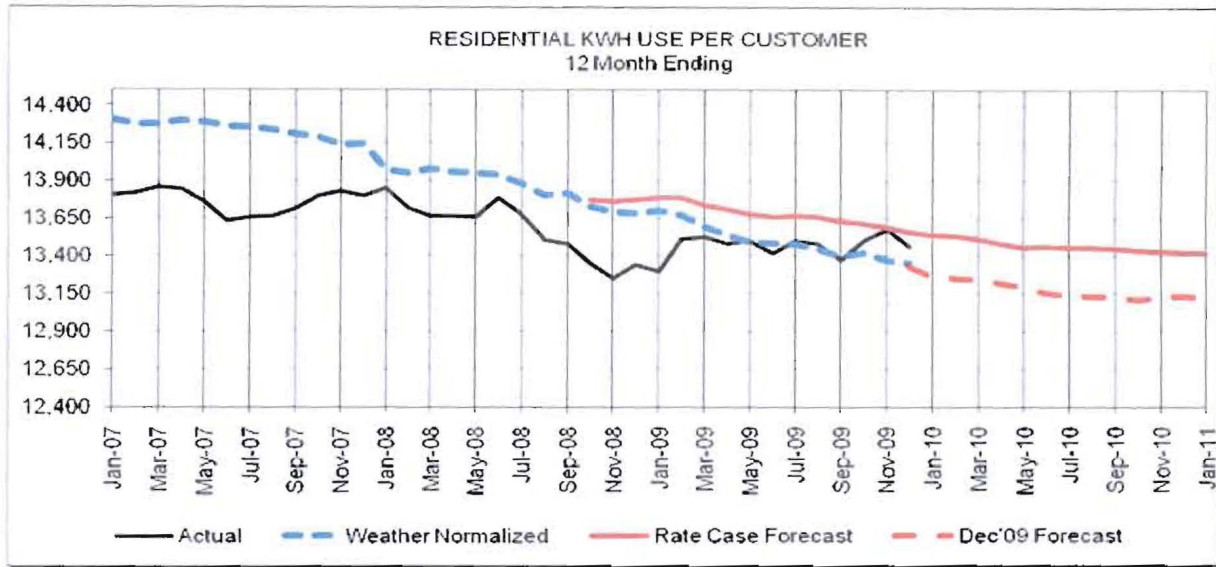
BILLED ACCOUNTS FORECAST BY CLASS - 2010

<u>CLASS OF BUSINESS</u>	<u>09-Dec FORECAST</u>	<u>08-Oct FORECAST</u>	<u>DIFF</u>	<u>% DIFF</u>
RESIDENTIAL	1,441,396	1,457,415	-16,019	-1.10%
COMMERCIAL	160,790	164,668	-3,878	-2.40%
INDUSTRIAL	2,456	2,565	-109	-4.20%
ST & HIGHWAY	1,598	1,578	20	1.30%
<u>PUBLIC AUTHORITY</u>	<u>23,276</u>	<u>23,503</u>	<u>-227</u>	<u>-1.00%</u>
TOTAL RETAIL	1,629,516	1,649,729	-20,213	-1.20%
REA	5	6	-1	-16.70%
<u>MUNICIPAL</u>	<u>15</u>	<u>16</u>	<u>-1</u>	<u>-6.30%</u>
<u>TOTAL WHOLESAL</u>	<u>20</u>	<u>22</u>	<u>-2</u>	<u>-9.10%</u>
TOTAL SYSTEM	1,629,536	1,649,751	-20,215	-1.20%



RESIDENTIAL KWH/CUST

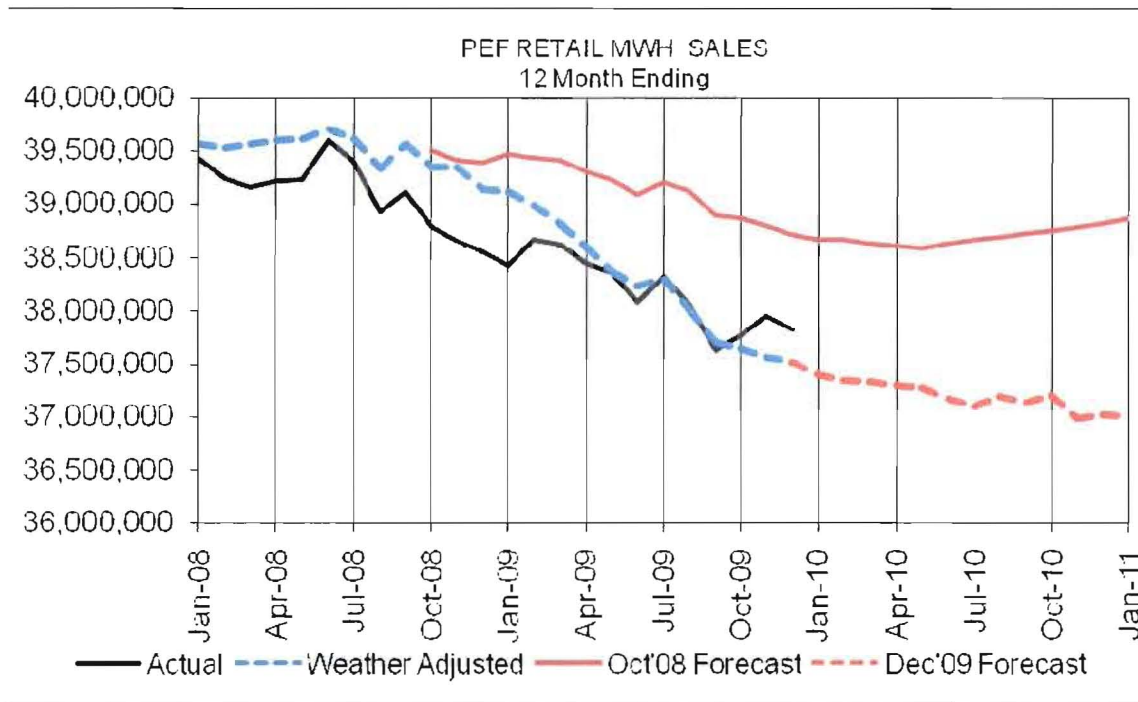
	<u>2009</u>	<u>OCT08F</u>	<u>DIFF</u>	<u>% DIFF</u>
Actual	13,459	13,554	-95	-0.7%
Weather Adjusted	13,346	13,554	-208	-1.5%



PEF FORECAST PERFORMANCE

BILLED MWH SALES ACTUAL & WEATHER ADJUSTED - 2009
 VERSUS RATE CASE FORECAST

<u>CLASS OF BUSINESS</u>	2009	2009	OCT08	<u>WEATHER ADJUSTED</u>	
	<u>ACTUAL</u>	<u>W-ADJ</u>	<u>FORECAST</u>	<u>DIFF</u>	<u>%DIFF</u>
RESIDENTIAL	19,399,196	19,236,156	19,641,100	-404,944	-2.1%
COMMERCIAL	11,883,476	11,778,581	11,810,837	-32,256	-0.3%
INDUSTRIAL	3,285,388	3,285,388	3,889,729	-604,341	-15.5%
ST & HIGHWAY	25,966	25,966	25,203	763	3.0%
<u>PUBLIC AUTHORITY</u>	<u>3,230,223</u>	<u>3,202,868</u>	<u>3,353,644</u>	<u>-150,776</u>	<u>-4.5%</u>
TOTAL RETAIL	37,824,249	37,528,959	38,720,513	-1,191,554	-3.1%
REA	1,217,503	1,217,503	3,264,651	-2,047,148	-62.7%
<u>MUNICIPAL</u>	<u>2,478,667</u>	<u>2,478,667</u>	<u>3,997,620</u>	<u>-1,518,953</u>	<u>-38.0%</u>
<u>TOTAL WHOLESALE</u>	<u>3,696,170</u>	<u>3,696,170</u>	<u>7,262,271</u>	<u>-3,566,101</u>	<u>-49.1%</u>
TOTAL SYSTEM	41,520,419	41,225,129	45,982,784	-4,757,655	-10.3%



PEF HISTORIC FORECAST ACCURACY 1990-2009

TOTAL RETAIL GWH
 VARIANCE FROM FORECAST PERFORMED IN PRIOR YEAR

<u>Year</u>	<u>Actual</u>	<u>Prior Yr. Forecast</u>	<u>Actual % Variance</u>	<u>Absolute Variance</u>
1990	24,878	25,087	-0.83%	0.83%
1991	25,179	25,893	-2.76%	2.76%
1992	25,414	26,230	-3.11%	3.11%
1993	26,528	26,606	-0.29%	0.29%
1994	27,675	27,861	-0.67%	0.67%
1995	29,499	28,802	2.42%	2.42%
1996	30,785	30,056	2.42%	2.42%
1997	30,850	31,462	-1.94%	1.94%
1998	33,387	32,088	4.05%	4.05%
1999	33,441	33,018	1.28%	1.28%
2000	34,832	35,465	-1.78%	1.78%
2001 ¹	35,263	36,502	-3.39%	3.39%
2002	36,859	36,617	0.66%	0.66%
2003	37,957	37,863	0.25%	0.25%
2004 ²	38,193	39,054	-2.20%	2.20%
2005 ³	39,177	40,293	-2.77%	2.77%
2006	39,432	40,148	-1.78%	1.78%
2007	39,282	40,830	-3.79%	3.79%
2008	38,556	41,208	-6.44%	6.44%
2009	37,824	38,721	-2.32%	2.32%
2000-2009	0.92%	0.98%	-2.36%	2.56%

¹ Large variance driven by Sept 11th-driven recession.

² 2004 had 3 Hurricanes suppress sales an estimated 209 GWh

³ The Forecast did not assume loss of City of Winter Park.

PEF HISTORIC FORECAST ACCURACY 1990-2009

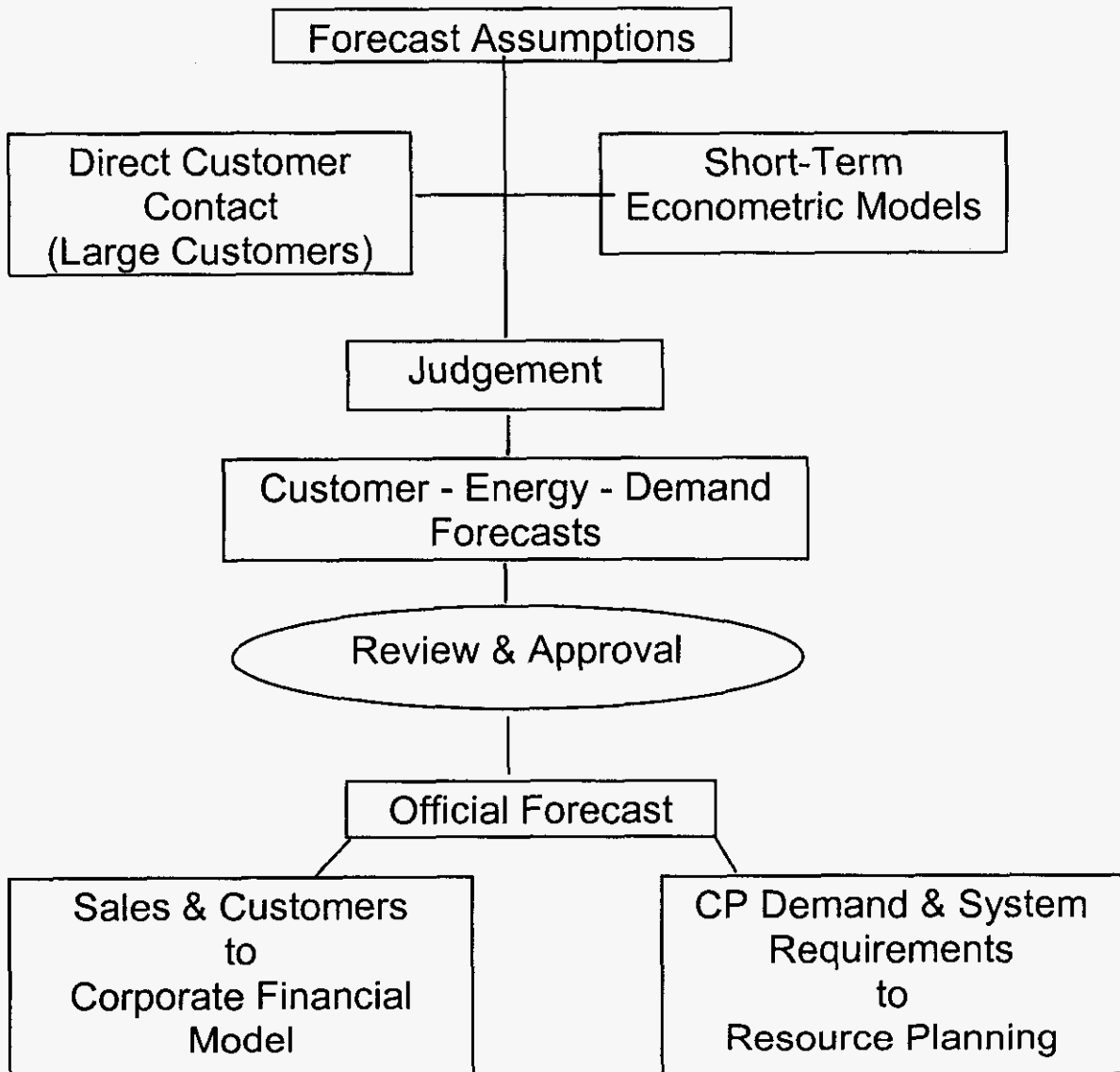
TOTAL RETAIL CUSTOMERS
 VARIANCE FROM FORECAST PERFORMED IN PRIOR YEAR

<u>Year</u>	<u>Actual Customers</u>	<u>Prior Yr. Forecast</u>	<u>% Variance</u>	<u>Absolute % Chg.</u>
1990	1,135,481	1,137,162	-0.15%	0.15%
1991	1,159,221	1,171,531	-1.05%	1.05%
1992	1,182,154	1,184,898	-0.23%	0.23%
1993	1,214,637	1,209,638	0.41%	0.41%
1994	1,243,876	1,256,976	-1.04%	1.04%
1995	1,271,768	1,276,187	-0.35%	0.35%
1996	1,292,057	1,295,339	-0.25%	0.25%
1997	1,314,492	1,318,550	-0.31%	0.31%
1998	1,340,835	1,335,837	0.37%	0.37%
1999	1,376,579	1,369,519	0.52%	0.52%
2000	1,400,281	1,396,312	0.28%	0.28%
2001	1,444,938	1,427,074	1.25%	1.25%
2002	1,475,760	1,467,982	0.53%	0.53%
2003	1,510,494	1,500,458	0.67%	0.67%
2004	1,548,603	1,540,079	0.55%	0.55%
2005	1,583,391	1,574,423	0.57%	0.57%
2006	1,620,374	1,598,403	1.37%	1.37%
2007	1,632,346	1,645,949	-0.83%	0.83%
2008	1,638,911	1,662,304	-1.41%	1.41%
2009	1,630,172	1,639,410	-0.56%	0.56%
2000-2009	1.70%	1.80%	0.33%	0.83%
			10 Negative	
			10 Positive	

PEF HISTORIC RETAIL PEAK DEMAND (MW) MONTHLY 2009 & JANUARY 2010

<u>Year</u>	<u>M</u>	<u>D</u>	<u>Hr</u>	<u>Total System</u>	<u>Wholesale</u>	<u>Retail</u>	<u>Retail Customers</u>	<u>Retail kW/Customer</u>	
2009	1	22	8	11,201	2,230	8,971	1,633,035	5.5	
2009	2	6	8	11,318	2,228	9,090	1,634,026	5.6	Winter
2009	3	3	8	7,833	1,219	6,614	1,634,760	4.0	
2009	4	30	18	6,824	706	6,118	1,631,990	3.7	
2009	5	11	17	8,741	1,157	7,584	1,630,484	4.7	
2009	6	22	18	10,254	1,618	8,636	1,629,102	5.3	Summer
2009	7	16	16	9,300	1,153	8,147	1,628,587	5.0	
2009	8	11	17	9,598	1,428	8,170	1,628,468	5.0	
2009	9	22	15	8,394	978	7,416	1,626,463	4.6	
2009	10	9	17	8,953	1,027	7,926	1,625,302	4.9	
2009	11	1	15	6,238	552	5,686	1,626,616	3.5	
2009	12	29	9	7,156	958	6,198	1,627,692	3.8	
2010	1	11	8	11,647	2,008	9,639	1,630,783	5.9	Winter

PEF Load & Energy Forecast: Process Flow Chart



PEF ENERGY AND CUSTOMER FORECASTING MODELS

RESIDENTIAL CLASS SALES

$RUPC_{Nonseasonal} = F(\text{CONSTANT, METER, RHDD, RCDD, WtrCDD, RRP12MA, LnRFLPY2, DFEB, ..., DDEC, DHURR, DAPR02, AR(1)})$

where:

RUPC	=	Residential kWh use per customer (non seasonal customers) adjusted for historical DSM program impacts
CONSTANT	=	Intercept term
METER	=	Average number of billing days in sales month
RHDD	=	Residential heating degree days - System-weighted
RCDD	=	Residential cooling degree days - System-weighted
WtrCDD	=	Winter residential CDCs - System-weighted; Months of Dec-Apr only
RRP12MA	=	Real residential electric price - cents per kWh deflated by U.S. CPI - 12 month moving average
LnRFLPY2	=	Log of Florida Total Personal Income - deflated by the PCE Implicit Price Deflator - 2 month average in millions of 2000 dollars
DFEB, ..., DDEC	=	Indicator variables to account for seasonal impacts on RUPC
DHURR	=	Indicator variable to account for 2004 Hurricane impacts on usage
DAPR02	=	Intercept shift variable to account for billing anomaly in Apr 2002
AR(1)	=	1st order autoregressive error term

$RUPC_{Seasonal} =$ Historic ratio of Seasonal RUPC-to-nonseasonal RUPC x RUPC nonseasonal forecast

Historic relationship is developed using monthly seasonal-to-nonseasonal RUPC data from 12/1998 to 11/2009

RESIDENTIAL CLASS CUSTOMERS

$RCUSTG = F(\text{CONSTANT, POPG, POPG Shift, DOverbuilding})$

where:

RCUSTG	=	Average annual change in residential billed customers
CONSTANT	=	Intercept term
POPG	=	Service territory population growth (Univ. of Florida Forecast)
POPG Shift	=	Intercept Shift, Service territory population growth (1991-2007)
Overbuilding	=	Indicator variable to account for overbuilding in residential construction

COMMERCIAL CLASS SALES

$CMWH = F(\text{CONSTANT, METER, CHDD, CCDD, RCP6, LnECON2, DFEB, ..., DMAY, DAUG, DNOV, dAPR02, DMAY02, DAUG05, DJUN08, DHURR, AR(1), AR(2), AR(3)})$

where:

CMWH	=	Commercial MWh adjusted for historical DSM program impacts
CONSTANT	=	Intercept term
METER	=	Average number of billing days in sales month
CHDD	=	Commercial heating degree days - system-weighted
CCDD	=	Commercial cooling degree days - system-weighted
RCP6	=	Real commercial electric price - cents per kWh deflated by U.S. CPI - 6 month moving average
LnECON2	=	Log of Florida commercial sector employment - 2 month average in thousands
DFEB, ..., DMAY, DAUG, DNOV	=	Indicator variables to account for seasonal impacts on CMWH
DAPR02	=	Intercept shift variable to account for billing anomaly in Apr 2002
DMAY02	=	Intercept shift variable to account for billing anomaly in May 2002
DAUG05	=	Intercept shift variable to account for billing anomaly in Aug 2005
DJUN08	=	Intercept shift variable to account for billing anomaly in Jun 2008
DHURR	=	Indicator variable to account for 2004 Hurricane impacts on CMWH
AR(1)	=	1st order autoregressive error term
AR(2)	=	2nd order autoregressive error term
AR(3)	=	3rd order autoregressive error term

COMMERCIAL CLASS CUSTOMERS

$CCUST = F(\text{CONSTANT, ResCUST, DTELECOM, DRECESSION})$

where:

CCUST	=	Average annual commercial billed customers
CONSTANT	=	Intercept term
ResCUST	=	Average annual residential billed customers
DTELECOM	=	Indicator variable to account for rapid customer growth in telecom reseller accounts
DRECESSION	=	Indicator variable to account for FL recession impact upon Commercial customer growth

INDUSTRIAL CLASS SALES
 NONPHOSPHATE SUBSECTOR MWh

where:

IWO-MWh = F(CONSTANT, METER, CCDD, RIP6, IPM-EMan2, DFEB,...DDEC, DMAY02, DOCT03, DNOV08, DDEC08, DRECESS, AR(1), AR(2))

IWO-MWh	=	Industrial MWh sales (excluding industrial phosphate sector energy sales)
		adjusted for historical DSM program impacts
CONSTANT	=	Intercept term
METER	=	Average number of billing days in sales month
CCDD	=	Commercial cooling degree days - system-weighted
RIP6	=	Real Industrial electric price - cents per kWh deflated by U.S. CPI - 6 month moving average
IPM-EMan2	=	FL Ind prod (Manufacturing) divided by FL Manuf employment - 2-month moving average
DFEB,...DDEC	=	Indicator variables to account for seasonal impacts on IWO-MWh
DMAY02	=	Intercept shift variable to account for billing anomaly in May 2002
DOCT03	=	Intercept shift variable to account for billing anomaly in Oct 2003
DNOV08	=	Intercept shift variable to account for billing anomaly in Nov 2008
DDEC08	=	Intercept shift variable to account for billing anomaly in Dec 2008
DRecess	=	Intercept shift variable to account for recessions effect on sales
AR(1)	=	1st order autoregressive error term
AR(2)	=	2nd order autoregressive error term

PHOSPHATE SUBSECTOR MWh

FPC Industrial representatives survey several large energy users to determine their planned operating schedules as well as their expected power consumption. All Phosphate mining customers electric consumption are projected individually. They are:

- PCS White Springs Inc.
- Mosaic Corp
- C.F. Industries Inc.
- U.S. Agr Chemicals

STREET & HIGHWAY LIGHTING CLASS SALES

where:

SHL = Constant SHLUPC X SHLC

SHL	=	Street Lighting MWh energy sales
SHLUPC	=	SHL use per customer - projected to be constant at current levels
SHLC	=	SHL customers - projected to continue to decline

PUBLIC AUTHORITY CLASS (SPA) SALES

where:

SUPC = F(CONSTANT, METER, SHDD, SCDD, RSP6, LNEG0V2, SCH_VAC, DFEB,...DAUG, DHURR, DJUN08, DDEC08, AR(1), AR(2))

SUPC	=	Public Authority average kWh use per customer
CONSTANT	=	Intercept term
METER	=	Average number of billing days in sales month
SHDD	=	SPA heating degree days - system-weighted
SCDD	=	SPA cooling degree days - system-weighted
LNEG0V2	=	Log of Florida governmental employment - 2 month moving average in thousands
RSP6	=	Real Public Authority electric price - cents per kWh deflated by U.S. CPI - 6 month moving average
SCH_VAC	=	Intercept shift variable to account for seasonal shutdown of school facilities
DFEB,...DAUG	=	Indicator variables to account for seasonal impacts on SUPC
DHURR	=	Indicator variable to account for 2004 Hurricane impacts on SUPC
DJUN08	=	Intercept shift variable to account for billing anomaly in Jun 2008
DDEC08	=	Intercept shift variable to account for billing anomaly in Dec 2008
AR(1)	=	1st order autoregressive error term
AR(2)	=	2nd order autoregressive error term

PUBLIC AUTHORITY CLASS (SPA) CUSTOMERS

where:

SPACUST = F (CONSTANT, RCUST, RCUST_SHIFT)

CCUST	=	Average annual commercial billed customers
CONSTANT	=	Intercept term
RCUST	=	Residential customers
RCUST_SHIFT	=	Residential customers Slope Shift in 1993

DECEMBER 2009 FORECAST - ECONOMIC INPUTS

U.S & Florida Economic Assumptions - 2006 - 2010
 (Source - Economy.Com; November 2009)

<u>Variable</u>	2005	<u>2006</u>	<u>2007</u>	<u>2008</u>	<u>2009</u>	<u>2010</u>
<u>U.S. Economy:</u>						
U.S. Real GDP (Bill \$)	10,989.5	11,294.9	11,523.9	11,739.3	11,945.3	12,362.3
Annual % Change		2.8%	2.0%	1.9%	1.8%	3.5%
U.S. CPI-U (1982-84=100)	195.3	201.6	207.3	215.3	214.4	218.0
Annual % Change		3.2%	2.9%	3.8%	-0.4%	1.7%
U.S. Industrial Production - Manufacturing	107.2	112.1	114.0	111.3	99.2	101.5
Annual % Change		4.6%	1.7%	-2.4%	-10.8%	2.3%
<u>Florida Economy:</u>						
FL Nonagricultural Employment (000)	7,799.9	8,002.4	8,018.4	7,763.8	7,386.3	7,219.1
Annual % Change		2.6%	0.2%	-3.2%	-4.9%	-2.3%
FL Commercial Employment (000)	5,699.9	5,802.3	5,871.5	5,746.0	5,501.0	5,427.8
Annual % Change		1.8%	1.2%	-2.1%	-4.3%	-1.3%
FL Governmental Employment (000)	1,081.2	1,099.3	1,122.6	1,128.1	1,121.0	1,103.1
Annual % Change		1.7%	2.1%	0.5%	-0.6%	-1.6%
FL Manufacturing Employment (000)	404.2	416.4	399.0	372.9	332.8	317.2
Annual % Change		3.0%	-4.2%	-6.5%	-10.8%	-4.7%
FL Personal Income (2005\$ in Mill.)	550,657	668,989	674,213	658,216	642,908	636,864
Annual % Change		21.5%	0.8%	-2.4%	-2.3%	-0.9%
FL Industrial Production Index (2002=100)	109.1	112.1	114.4	112.9	103.6	104.0
Annual % Change		2.8%	2.1%	-1.3%	-8.3%	0.4%

OCTOBER 2008 FORECAST - ECONOMIC INPUTS

U.S & Florida Economic Assumptions - 2006 - 2010
 (Source - Economy.Com; September 2008)

Variable	2005	2006	2007	2008	2009	2010
U.S. Economy:						
U.S. Real GDP (Bill \$)	10,989.5	11,294.9	11,523.9	11,739.3	11,945.3	12,362.3
Annual % Change		2.8%	2.0%	1.9%	1.8%	3.5%
U.S. CPI-U (1982-84=100)	195.3	201.6	207.3	215.3	222.0	225.2
Annual % Change		3.2%	2.9%	3.8%	3.1%	1.5%
U.S. Industrial Production - Manufacturing	107.2	109.6	111.4	111.7	112.7	115.3
Annual % Change		2.2%	1.7%	0.3%	0.9%	2.3%
Florida Economy:						
FL Nonagricultural Employment (000)	7,799.9	8,002.4	8,041.4	7,941.6	7,865.6	8,018.1
Annual % Change		2.6%	0.5%	-1.2%	-1.0%	1.9%
FL Commercial Employment (000)	5,699.9	5,839.1	5,923.7	5,913.3	5,884.0	6,013.8
Annual % Change		2.4%	1.4%	-0.2%	-0.5%	2.2%
FL Governmental Employment (000)	1,081.2	1,099.3	1,124.4	1,130.9	1,114.5	1,115.6
Annual % Change		1.7%	2.3%	0.6%	-1.4%	0.1%
FL Manufacturing Employment (000)	404.2	405.1	388.7	366.9	359.2	359.7
Annual % Change		0.2%	-4.1%	-5.6%	-2.1%	0.1%
FL Personal Income (2000\$ in Mill.)	550,657	582,570	594,292	587,390	583,958	602,501
Annual % Change		5.8%	2.0%	-1.2%	-0.6%	3.2%
FL Industrial Production Index (2002=100)	109.1	112.1	114.9	116.4	117.6	120.3
Annual % Change		2.8%	2.6%	1.3%	1.0%	2.3%

PEF CUSTOMER, ENERGY AND PEAK DEMAND FORECAST
GENERAL ASSUMPTIONS
Dec-09

1. Normal weather conditions for energy sales are assumed over the forecast horizon using a sales-weighted thirty-year average of conditions at seven (7) weather stations across Florida (Saint Petersburg, Tampa, Orlando, Winter Haven, Gainesville, Daytona Beach, and Tallahassee). For kilowatt-hour sales projections, normal weather is based on a historical thirty-year average of the 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 historic hourly 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. 153 (March 2009) provide the basis for development of the customer forecast. An October 2009 update from the Florida Legislature's Office of Economic & Demographic Research (EDR) "Demographic Estimating Conference" was also incorporated. State and national economic assumptions produced by Economy.Com in their national and Florida forecasts (October 2009) are also incorporated.
3. Within the PEF service area, the phosphate mining industry is the dominant sector in the industrial sales class. Four (4) major customers accounted for 33 percent of the industrial class MWh sales. These energy intensive customers mine and process phosphate-based fertilizer products for the global marketplace. Both supply and demand 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 these global as well as the local conditions. Consumption in 2010 will be significantly impacted by the global recession. Global trade in general declined in 2009 and no one expects significant improvement in 2010. The strength of the U.S. currency on the foreign exchange will play a roll in the demand for U.S. phosphate products. A significant risk to this projection lies in the volatile price of energy (natural gas), which is a major cost of both mining and producing phosphoric fertilizers. The energy projection for this industry in 2010 assumes no major reductions or shutdowns of operations in the PEF service territory. However, the forecast recognizes that electric output from self-owned generation facilities will be dependent upon current prices being charged by PEF and Tampa Electric.
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 but with slower growth in the near term to reflect the weak economy. Contracts for this service in 2010 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 in 2010 included in this forecast are with the Florida Municipal Power Agency (FMPA), Reedy Creek Utilities (RCU), Gainesville Regional Utilities (GRU), Seminole Electric Cooperative, Inc. (SECI) and the cities of New Smyrna Beach, Tallahassee, and Homestead.
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 non-dispatchable DSM programs required to meet the approved goals set by the FPSC on Dec 1, 2009.
7. Expected energy and demand reductions from customer-owned self-service cogeneration facilities 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 power at time of peak.

8. The economic outlook for this forecast was developed in October 2009 from data purchased from Economy.Com and a Florida county population projection from the University of Florida in March 2009 with a statewide population update in October 2009 by the Demographic Estimating Conference. These assumptions and resulting forecast replaces those used in the PEF rate case filed in 2009 which was developed before the collapse of financial system in September 2008 and significant increase in unemployment.

The U.S. economy appeared to be stabilizing at the time of the forecast development. Economy.com called for the national recession to bottom out in Q3:09 but the devastated housing market continued to hold down their optimism in the Florida economic condition. The U.S. unemployment rate appeared to be leveling off while Florida unemployment continued to rise in December 2009. While a significant rebound had occurred in the stock market, credit conditions, i.e., lending, had shown no improvement. This was restricting home sales as well as small business money management conditions. Home foreclosures and "short sales" had shot up in the State well beyond national rates and above any level seen before.

The collapse of the State housing market had taken its toll on every industry, either directly or indirectly, tied to the construction, sale or financing of the single family house. Employees put out of work were forced to leave the State to find other opportunities. In 2009 this has resulted in Florida's first annual decline in population since WWII when servicemen left Florida military bases to return home. The Florida legislature's Office of Economic & Demographic Research report in October 2009 showed the State population declining a second year in a row.

Stimulus efforts by the Federal government via the Wall Street bailout, the "Cash for Clunkers" program and unemployment insurance extensions appeared to keep the national economy from further decline. However, many worried about the longevity of these counter-cyclical measures after the stimulus money dried up. Particular concern in the areas of State government budget balancing requirements and commercial real estate mortgage refinancing issues worried many that continued drag on economic growth continued to exist. The PEF load and energy forecast reflects these concerns in the 2010 projections.